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THE RELATION OF NASAL OBSTRUCTION TO ARTICULATORY CAPACITY.

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INTRODUCTION.

THE object of the present paper is to record the results of a number of investigations in which the consonantal articulatory capacity of 700 children was precisely estimated and correlated with the degree of nasal obstruction existing; with these as a basis an attempt will be made to determine the relative importance of nasal obstruction in producing articulatory defects. It has long been known that nasal obstruction is the chief cause of a certain variety of dyslalia, which will presently be specified, but no sufficiently systematic studies have been made to establish the extent to which it is concerned in the production of *general* dyslalic troubles; it is with this latter question that the present paper deals.

The typical dyslalia caused by nasal obstruction is that termed by Kussmaul* *rhinolalia clausa*, which has been carefully described

* Kussmaul, 'Die Störungen der Sprache,' 1885, S. 253.

by H. Gutzmann,* Rouma,† Treitel,‡ and others. This is characterised by a difficulty in the enunciation of the sounds *m*, *n*, *ng*, which frequently are replaced by *b*, *d*, respectively, and by the addition of a disagreeable nasal clang to the whole speech, especially to the vowel sounds. It is a common speech defect. Westergaard§ found it present in 0·48 per cent. of 34,000 normal school-children in Copenhagen, and this is an extremely conservative estimate. Of 21,394 cases of dyslalia in Hungary, Sarbo|| found that 11 per cent. were suffering from closed rhinolalia; of 542 more carefully investigated cases Westergaard¶ found that 53 per cent. were suffering from it, a difference largely due to non-comparable methods of examination. The general clang defect is much more frequent than the inability to enunciate a given nasal consonant; Mehnert,** for instance, found that of children with *blesitas* (defective enunciation of consonants) only 0·3 per cent. failed with either *m* or *n*, and Treitel†† notes the same fact.

Although most writers state that the defective utterance due to nasal obstruction is usually confined to a small group of consonants, others, such as Bresgen,‡‡ Liebmann,§§ etc., attribute to this factor a more extensive rôle, and give it as the chief cause of many cases of dyslalia, a view that the present investigation does not confirm. The current opinions are similarly divergent with regard to the incidence of rhinolalia in nasal obstruction; thus Winckler||| states that it is rare in chronic tonsillitis, and Mehnert¶¶ finds that only 2·5 per cent. of cases of dyslalia arise from nasal obstruction, whereas Cassel*** found 21 cases of dyslalia in 51 children with nasal obstruction.

MATERIAL.

The present study is based on the investigation of the consonantal articulatory capacity of 700 London school-children—386

* H. Gutzmann, 'Von den verschiedenen Formen des Näsels,' 1902.

† Rouma, 'La parole et les troubles de la parole,' 1907, p. 66.

‡ Treitel, 'Grundriss der Sprachstörungen,' 1894, S. 24.

§ Westergaard, 'Nationalökonomisk Tidsskrift,' December, 1897.

|| Sarbo, 'Monatsschr. f. Sprachheilk.,' 1901, Jahrg. xi, S. 66, 76.

¶ Westergaard, *loc. cit.*

** Mehnert, 'Über Sprachstörungen,' 1904, S. 15.

†† Treitel, *loc. cit.*

‡‡ Bresgen, 'Monatsschr. f. Sprachheilk.,' 1901, Jahrg. xi, S. 97.

§§ Liebmann, 'Vorlesungen über Sprachstörungen,' 1898, Heft 2, S. 63.

||| E. Winckler, A. Gutzmann's 'Festschrift,' "Sprachstörungen u. Sprachheilkunde," 1908, S. 42.

¶¶ Mehnert, *op. cit.*, S. 13.

*** Cassel, 'Monatsschr. f. Sprachheilk.,' 1903, Jahrg. xiii, S. 223.

boys and 314 girls. These are divided into two groups, which were selected by the teacher according to whether they showed "normal" or "defective" speech respectively. The first group comprised 469 children, a full account of whose articulatory capacity has been published elsewhere*; the second comprised 231 children. The distinction is thus a practical one, for it relates to the speech capacity as noted from an educational point of view, and the two groups must be separately considered.

METHOD.

The reader is referred to a previous paper† for the detailed description of the technique adopted in the examination. Shortly stated this was as follows: The children were each tested with 227 different consonantal sounds, and marks were allotted according to the standard of clearness attained in enunciation. The results, therefore, relate to nearly 160,000 tests, most of which were repeated. The method adopted was such as to ascertain the *maximum* articulatory capacity under the most favourable circumstances, and for several reasons the marks obtained were calculated on a very low standard, so that often the speech of a child obtaining even 97 per cent. of marks was quite hard to understand. The marks are here given throughout in terms per thousand.

To estimate the degree of nasal obstruction present five standards were arbitrarily chosen, called respectively "*nil*," "*slight*," "*some*," "*considerable*," "*bad*"; one found it tolerably easy to place any given case under one of these categories.

A. *Normal*.

Of the 469 "normal" cases 254 were in boys, 215 in girls. The numbers appearing in each class are shown in the following table:

TABLE I.

	<i>Nil</i> .	<i>Slight</i> .	<i>Some</i> .	<i>Considerable</i> .	<i>Bad</i> .	Total.
Boys	41	122	64	21	3	254
Girls	35	94	62	23	1	215
Stated in percentage { Boys	16·2	48·0	25·3	9·5	1·2	
of the whole. { Girls	16·2	43·7	28·7	16·9	0·4	

* Ernest Jones, 'Internat. Arch. für Schulhygiene,' April, 1908, Bd. v, S. 137.

† *Ibid.*, November, 1907, Bd. iv, S. 186.

As the number of cases in the fifth class ("bad") are too few to warrant any conclusions being drawn from them, they will not further be considered. The average marks obtained in the other four classes are given in the next table.

TABLE II.

	Boys.	Girls.
<i>Nil</i>	985.2	983.5
<i>Slight</i>	972.1	981.3
<i>Some</i>	974.0	979.2
<i>Considerable</i>	967.2	979.5

From this table it would seem that nasal obstruction is with normal girls of no great importance in relation to general articulatory capacity, but is with boys of decided significance. This conclusion is supported by the following considerations.

In the next table the cases are divided into three groups—"low," "medium," and "high"; in the "low" group are placed cases having fewer than 970 marks, in the "medium" those having between 970 and 996 marks, and in the "high" those having 996 marks and higher.

TABLE III.

	Boys.				Girls.			
	Low.	Medium.	High.	Total in class.	Low.	Medium.	High.	Total in class.
<i>Nil</i>	8	13	20	41	7	12	16	35
<i>Slight</i>	29	42	51	122	22	39	33	94
<i>Some</i>	18	30	16	64	19	26	17	62
<i>Considerable</i>	12	8	4	24	7	10	6	23
<i>Bad</i>	2	0	1	3	1	0	0	1
Total in group	69	93	92	254	56	87	72	215

After converting these figures into percentages for comparative purposes, we may study them from two points of view. Table IV gives the numbers stated in percentages of the total number in each class (*i e.* of nasal obstruction).

TABLE IV.

	Boys.			Girls.		
	Low.	Medium.	High.	Low.	Medium.	High.
<i>Nil</i>	19·5	30·2	48·8	20·0	34·3	45·4
<i>Slight</i>	23·8	34·4	41·8	23·4	41·5	35·1
<i>Some</i>	28·1	46·9	25·0	30·6	41·9	27·1
<i>Considerable</i>	50·0	33·3	16·7	30·4	43·5	26·9

Contrasting first the four classes of obstruction in the boys, we note that of the "*nil*" class nearly a half are placed in the high mark group, and less than a fifth in the low. At the other end of the scale with the "*considerable*" class exactly the reverse is true, a half being placed in the low mark group and less than a fifth in the high. Between these extremes there occurs a uniform change in passing from one class to the next, so that the correlation between the degree of nasal obstruction and the percentage of cases appearing in the low or high mark groups respectively is very close indeed. There is a greater difference between the "*some*" and "*considerable*" classes than between the others, so that the last stage seems to be specially significant.

Considering now the girls, we see that though on the whole the same correlation can be traced, it is certainly less striking. For instance, the "*nil*" class is divided in almost exactly the same way as the corresponding one with the boys, but the "*considerable*" class does not deviate from this to anything like the same extent as that of the boys.

The next table gives the numbers stated in percentages of the total number in each group (*i. e.* of marks obtained).

TABLE V.

	Boys.			Girls.		
	Low.	Medium.	High.	Low.	Medium.	High.
<i>Nil</i>	11·9	14·0	22·0	12·7	13·8	22·2
<i>Slight</i>	43·3	45·2	56·0	40·0	44·8	45·8
<i>Some</i>	26·9	32·3	17·6	34·5	29·9	23·6
<i>Considerable</i>	17·9	8·6	4·4	12·7	11·5	8·3

26·8 per cent. of all the boys belong to the "low" group, 36·8 per cent. to the "medium," and 36·4 per cent. to the "high"; with the girls the corresponding percentages are 25·7, 40·6, and 33·6. Thus the "group" division is sensibly the same in the two sexes, as was also the "class" division. Any difference between the two sexes in the tables can therefore be attributed only to the factor of nasal obstruction, for the total marking and the general incidence of nasal obstruction are practically the same with both.

Considering first the boys, we see that a higher percentage of those with "low" marks belong to the classes of much obstruction, as contrasted with those belonging to the classes of slighter obstruction, than is the case with those getting "high" marks. Thus the "low" mark group is almost equally divided between the first two classes of obstruction (55·2 per cent.) and the last two (44·8 per cent.), whereas with the "high" mark group there are more than three times as many in the first two classes (68 per cent.) as there are in the last two (22 per cent.). In other words, the worse is the articulatory capacity the greater is the amount of nasal obstruction.

With the girls the last two classes (of much obstruction) are more numerous in both the "low" and "high" groups than with the boys. Consequently, though a similar difference between these two groups is found as in the case of the boys, it is much less marked.

The incidence of nasal obstruction being about the same in the two sexes, it would therefore seem that a given degree of instruction produces, probably through the resulting impairment of auditory acuity, a more harmful effect on the articulatory capacity of boys than on that of girls. This supports the hypothesis I have elsewhere put forward* that the articulatory capacity of boys develops only by means of hearing, while that of girls develops also by means of vision (unconscious lip-reading). Partial deafness is thus more deleterious to the speech of boys than to that of girls, because the latter have another source of education, namely, the eye. The greater incidence of nearly all forms of speech defect in boys is well known, a fact I would in part explain by this difference in the development of speech in the two sexes.

B. *Abnormal.*

Of the 231 "abnormal" cases, *i. e.* with gross articulatory defects, 132 were boys and 99 girls. The numbers in each class of nasal obstruction are shown in the following table:

* Ernest Jones, Sixth International Congress of Psychology, August, 1909, BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, vi, p. 413.

TABLE VI.

		<i>Nil.</i>	<i>Slight.</i>	<i>Some.</i>	<i>Considerable.</i>	<i>Bad.</i>	<i>Total.</i>
Boys		15	34	40	26	17	132
Girls		10	25	29	22	13	99
Percentage of total	{ Boys	11·3	25·7	30·3	19·7	12·9	
	{ Girls	10·1	25·2	29·2	22·2	13·1	

Here again it will be noticed that the incidence of the different degrees of nasal obstruction is sensibly the same in the two sexes.

The average marks obtained by the five classes of obstruction are given in the next table.

TABLE VII.

	Boys.	Girls.
<i>Nil</i>	879·9	781·5
<i>Slight</i>	868·8	890·3
<i>Some</i>	882·2	824·9
<i>Considerable</i>	868·6	828·6
<i>Bad</i>	921·4	895·4

Here no correlation whatever is obvious between the degree of nasal obstruction and the number of marks, *i. e.* the efficiency of articulation. In fact, the class with most obstruction ("bad") is in both sexes the one with the best articulation, and with the girls that with the least obstruction has by far the lowest marks.

TABLE VIII.

	Boys.				Girls.			
	Low.	Medium.	High	Total in class.	Low.	Medium.	High.	Total in class.
<i>Nil</i>	5	5	5	15	4	5	1	10
<i>Slight</i>	12	9	13	34	7	10	8	25
<i>Some</i>	10	16	14	40	10	11	8	29
<i>Considerable</i>	9	13	4	26	4	10	8	22
<i>Bad</i>	2	9	6	17	4	5	4	13
Total in group	38	52	42	132	29	41	29	99

A similar conclusion is reached if the results are further analysed. In Table VIII the cases are arranged in three groups according to the marks allotted; in the "low" group are those with fewer than 850 marks, in the "medium" those with between 850 and 960 marks, and in the "high" those with more than 960. These arbitrary standards are chosen so as to obtain an approximately equal triple division.

These figures may, as with the normal cases, be considered from two points of view after converting them into percentages. The next table gives the numbers stated in percentages of the total number in each *class*.

TABLE IX.

	Boys.			Girls.		
	Low.	Medium.	High.	Low.	Medium.	High.
<i>Nil</i>	33·3	33·3	33·3	40·0	50·0	10·0
<i>Slight</i>	35·3	26·5	38·2	28·0	40·0	32·0
<i>Some</i>	25·0	40·0	35·0	34·5	37·9	27·6
<i>Considerable</i>	34·6	50·0	15·4	18·2	45·5	36·4
<i>Bad</i>	11·8	52·9	35·3	30·8	38·5	30·8

The total lack of regularity in progression is striking in this table. With the boys the percentage of cases in the "considerable" class appearing in the "high" group is much lower than that of the first three classes ("*nil*," "*slight*," and "*some*"), but with the "bad" class the minimal group is the "low" one; on the other hand, with the first three classes the grouping is almost the same in each. With the girls the same absence of order is evident. The "bad" class shows a more favourable mark grouping than either the "*nil*" or the "*some*" class; the worst grouped class is the "*nil*" one, and the best the "considerable."

The next table gives the numbers stated in percentages of the total number in each *group*.

The percentage number of boys in each group is 28·7, 39·3, 31·8 respectively, the corresponding numbers with the girls being 29·3, 41·4, and 29·3. Thus here also, as with the normal cases, the incidence is about the same in the two sexes. In this table, as in the last, there is no trace of orderly progression or of even the roughest correlation between the degree of nasal obstruction and the mark grouping, *i. e.* the articulatory capacity. This lack of correlation

cannot be entirely due to the relatively small number (231) of cases investigated, as it is so gross. It is possible, and, indeed, probable, that such a correlation would be traced if a much greater number of cases were taken, but the factor of nasal obstruction is evidently of slight significance, and is easily submerged by more important ones.

TABLE X.

	Boys.			Girls.		
	Low.	Medium.	High.	Low.	Medium.	High.
<i>Nil</i>	131.1	9.6	11.9	13.8	12.2	3.4
<i>Slight</i>	31.6	17.3	30.9	24.1	24.4	27.6
<i>Some</i>	26.3	30.8	33.3	34.5	26.8	27.6
<i>Considerable</i>	23.7	25.0	9.5	13.8	24.4	27.6
<i>Bad</i>	5.3	17.3	14.3	13.8	12.2	13.8

CONCLUSIONS.

Two definite conclusions emerge from this study :

(1) In average school-children (469 cases, 106,500 tests) the articulatory capacity for consonants is found to vary with the degree of nasal obstruction. The dependence of the capacity on this factor is not very close, but is much more decided with boys than with girls. The incidence of nasal obstruction being equal in the two sexes, it would seem that a given degree of it produces, through partial deafness or in some other way, a more harmful effect on the articulatory capacity of boys than on that of girls. This is in harmony with the author's hypothesis, previously put forward, that hearing is more essential in the acquirement of speech with boys than with girls, the latter making use of a second channel of education, lip-reading, which is shut to boys.

(2) In children with gross articulatory defect or dyslalia (231 cases, 52,000 tests) no correlation whatever was found between the extent of this defect and the degree of nasal obstruction present. Investigation of a larger series might reveal a slight correlation, but nasal obstruction is evidently not an important cause of dyslalia in general, and any action it may have is readily obscured by that of more important factors.

BENIGN CYST OF THE TIBIA.*

By H. A. LEDIARD, F.R.C.S.,

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ON August the 14th, 1910, a girl, aged 14 years, was brought to the Cumberland Infirmary on account of a large swelling in the lower third of the left leg, which had been growing for nine months so far as it had been observed. At first there was no pain, but more recently, when weight was put on the leg, as in walking, pain was felt. During the three months prior to admission the swelling in the leg had increased considerably.

On the left leg a well-marked swelling of the tibia was seen, which involved the lower third of the bone, reaching almost to the ankle-joint. The swelling was uniform in outline and pear-shaped, the widest part being above the ankle and the apex tapered off into the normal bone above. The swelling was firm to the touch and the skin over it was tightly stretched, but not adherent. No egg-shell crackling was obtained. There was no alteration in the colour of the skin over the swelling, nor were any vessels visible. No tenderness was present except on firm pressure. There was no rise of temperature locally nor generally, and the general condition of the girl called for no comment.

In order to discover the nature of the swelling a trephine was used over the inner aspect of the swelling. The bit of bone removed was exceedingly thin and presented no obstacle to the saw. The finger discovered a large cavity in the bone, which contained a clear watery fluid, slightly tinged with blood. No spicules of bone were detected, but a smooth thin membrane lined the cavity. The bone appeared to be very thin and expanded uniformly all round. The fluid from the cyst was not saved for examination. A few days later the limb was amputated at the knee-joint. The girl recovered, and left the hospital on October the 1st.

There are a few points which call for remark: The swelling of the bone was consistent with a sarcoma, or with tubercular disease of the medulla, and, as matters turned out, with a cyst of the bone. The absence of constitutional disturbance gave no indication in any special direction. There was no egg-shell crackling. The age of the girl favoured the presence of sarcoma, but the surface of the swelling was even all over and shaded off above into the normal

* Paper read at the Royal Society of Medicine, Clinical Section, on March the 10th, 1911.

bone at the junction of the middle and lower thirds of the limb. When the trephine was used, it was seen that an expansion of the bone into a thin shell was the disease to be dealt with.

Radiography.—Prior to any interference a radiograph was taken, which shows a uniform smooth-surfaced swelling of the tibia, and a light shadow in contrast with the dark one of the healthy bone of the shaft above the cyst. At the lower part the swelling ends abruptly at the level of the epiphysis.

To those experienced in the radiography of bone cysts the radiograph of this case may be conclusive. Beck was the first to allude to the diagnostic differentiation of bone cysts by radiography. He said—"The radiograph yields a clearly bounded line of cortex of the thickness of letter paper, forming a frame for a quite transparent oval surface of spindle form. The cohesion of the outer rind is nowhere broken. The epiphyses are normal." Lexer has attributed a high value to the radiography of bone cysts, but other observers have not been so impressed. Rumpel has concluded that cysts of bone can be distinguished from sarcomata by radiography. In 1907 Jones and Morgan wrote on "Benign Cysts of the Long Bones," and stress was laid by them on the value of radiography in the diagnosis. Since then Mr. Hugh Lett has published a radiograph of a cyst of the humerus, upon which he operated with success. There can be no doubt that radiography is of great value in aiding the diagnosis of these cases, even if it cannot be said to give a conclusive verdict when it is brought into use in bone cysts.

In my case the radiograph shows no thin dark line bounding the cyst suggestive of the thin shell of bone which was found and can be seen in the specimen or photograph.

Treatment.—Owing, to some extent, to the length of time which it was proposed to take for the examination of the bone removed by the trephine and the bit of lining membrane of the cyst—viz. ten days—it was decided to deal with the case as one of probable sarcoma, and an amputation through the knee-joint was done. Seeing how large the cyst really is, and how thin a shell of encasing bone is shown, I question whether any conservative method of treatment would have afforded the girl a useful and reliable support for the weight of the body—*e. g.* by such a method of treatment as has been adopted in a case of cyst of the humerus by Mr. Hugh Lett.

In the present case amputation was resorted to because the diagnosis leaned to a malignant growth, and not because the limb might have been unserviceable if a less drastic means had been adopted.

The cyst.—The cyst measures $3\frac{1}{4}$ in. in length and $2\frac{1}{4}$ in. in breadth. The shell of the bone is very thin, and before long egg-shell crackling would have been present, and a great liability to fracture. The interior of the cyst is not quite as even as the ex-

FIG. 1.



ternal subcutaneous surface felt, for the inner wall shows numerous small septa of bone, forming parts of smaller cysts, lying against the thin outer shell, but no spicules of bone are seen.

The fibula was unaltered, but ere long this bone would have supported the weight of the body alone.

The epiphysis of the lower end of the tibia projected into the interior of the cyst, and though normal in thickness the surface of the cartilage is at one point seen to be invaded or eroded, and the subjacent bone is not normal in colour or as normal as other parts. The cyst suggests the expansion of one large cyst and the presence

of numerous small cysts of unequal size at the periphery, showing no regularity in arrangement.

The growth of the cyst was actively proceeding in all directions,

FIG. 2.



upwards in the shaft of the bone, backwards in the direction of the Achilles tendon, forwards as well as downwards, invading the epiphysis. Reference to the photograph will show the changes in the epiphysis and in the bone-shell which have been described.

Microscopy.—There is no evidence that the cyst has developed from a growth, and no cartilage was found in connection with the cyst formation. The formation appears to be caused by a process of absorption, probably starting in the marrow and gradually ex-

tending outwards with expansion of that part of the shaft. The wall of the cyst varies at different parts. Near the upper and anterior part the cyst membrane is extremely thin and closely adherent to the altered and atrophied bone, or bone in course of atrophy. Lower down complete absorption of the bone-shaft has taken place, and the membrane is in close contact with the periosteum. A part shows that the process of absorption is spreading through and destroying the epiphysial cartilage line and invading the epiphysis. The membrane lining the cavity is of a loose structure and slightly adherent to the altered and expanded bony tissue or periosteum.

The microscopical characters of the cyst wall consist merely of altered bone in an active process of absorption due to the action of numerous phagocytic cells and osteoclasts (giant-cells). The process of repair is also taking place as represented by granulating tissue making up the "cyst wall."

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THREE CASES OF ENLARGED THYMUS IN INFANTS.

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CASE 1.—A male child, aged 3 months, was admitted to the Royal United Hospital on September the 6th, 1910, on account of urgent dyspnœa. Since birth the child had been observed to have some difficulty of breathing, but this had become much more marked in the last few days. On admission the infant was pallid rather than cyanosed and obviously very ill: its temperature was 97° F., pulse 132, breathing hurried, 44 to the minute, with inspiratory dyspnœa and stridor. The head was thrown somewhat back. There was much sucking in of the supra-clavicular fossæ and of the lower part of the chest during inspiration.

Nothing abnormal could be seen or felt at the back of the throat. Tracheotomy was performed, but without relief to the symptoms, and half an hour later the child died.

At the post-mortem examination the thymus was found to be greatly enlarged. Its weight was 34 gm., length 3 in., breadth 3 in., and its thickness, from before backwards, just over three quarters of an inch. It was paler and much firmer than normal, and instead of the flattened, elongated, somewhat indefinite structure usually met with, was pyramidal in shape with well-defined boundaries, the apex of the pyramid, the size and shape of the extremity of a man's forefinger, peeping up for about half an inch above the upper opening of the thorax. The larynx and trachea appeared natural. The largest mesenteric glands were the size of large peas. The spleen was not weighed, but its volume was approximately half that of the thymus. The tonsils, thyroid, heart, lungs, kidneys, adrenals and liver appeared normal.

On examination of the thymus it was found that though the division into lobes was well marked there was no indication of further subdivision into lobules. The cut surface was pale, smooth, and homogeneous.

Microscopical examination of the deeper parts of the gland showed an almost entire absence of trabeculæ; nearer the surface the connective tissue which normally separates the lobules was much compressed and atrophied; everywhere the diminution of stroma was conspicuous and epithelioid cells very scanty. Hassal's corpuscles were fairly numerous, but on the whole appeared to be smaller than normal.

CASE 2.—A boy, aged 10 months, was brought to the hospital on November the 17th, 1910, for vomiting and diarrhoea. A mixture containing mercury and bismuth was prescribed, and on the following day its mother thought the child had recovered. It remained apparently well for two days, but on the third day, whilst being bathed, suddenly died.

Post mortem, the heart and lungs appeared normal; the spleen weighed 23 gm.; the bronchial glands, liver, kidneys and adrenals seemed normal; the glands in the mesentery were enlarged to about the same size as in the previous case.

The thymus weighed 24 gm. Soft, pink, elongated and enlarged, no differences save that of size could be discovered between it and the normal organ. Division into lobules was well marked. Microscopically it resembled the thymus of Case 1 except that lobulation was well marked, and that in many of the perivascular

spaces were to be seen scattered groups of spherical mononuclear cells each about twice the diameter of a lymphocyte.

CASE 3.—A well-nourished and hitherto strong and healthy infant, aged 9 weeks, was found on April the 14th, 1907, dead in bed by the side of its mother, with whom it slept. At the post-mortem examination, made on the following morning, the following appearances were noted: The head and neck were mottled and livid and contrasted sharply with the body and limbs, which were white. There were no marks of constriction of the neck and the lividity and mottling did not end abruptly, but shaded off into the dead white colour of the trunk.

The thymus was enlarged and its shape resembled that of Case 1, the increase in size being chiefly in breadth and depth. It was paler and firmer than normal. The heart and pericardium were healthy. The innominate veins and the veins of the head and neck were noticeably dark and distended, but the blood elsewhere was not particularly dark or fluid. The right side of the heart was not engorged. The larynx and trachea contained a little frothy mucus but were otherwise natural. The lungs were mottled with spots of congestion. The tonsils were not large. There were no enlarged glands in the neck, chest or abdomen. The spleen did not appear to be increased in size. The brain was healthy.

Whilst enlargement of the thymus is frequently discovered in infants in whom sudden death from apparently trivial causes has taken place, the mode in which the fatal result is brought about in these cases has been the subject of much diversity of opinion. The earlier views that death was the effect of mechanical causes, such as pressure of the bulky thymus on the trachea, on the large blood-vessels or heart, or on the vagi, has been replaced by the supposition, advanced by Paltauf, that these patients possess a peculiar "lymphatico-chlorotic" constitution (*status lymphaticus* or *lymphatism*), in which dissolution is proved to occur from sudden failure of the cardiac and respiratory centres.

Although the large number of cases which have been reported of recent years, especially in connection with death occurring during the administration of anæsthetics, lend considerable support to this view, it is certain that in some cases the mechanical effect of pressure on the important structures passing through the upper opening of the thorax is the important factor. J. S. Fowler (1) quotes Virchow as saying, "I possess a preparation from a child who died from asthma, in which the thymus is so greatly enlarged that I cannot see how one can deny the possibility that the dyspnoea was

caused by its pressure." Osler (2) refers to Siegel's case ('Berl. klin. Woch.,' 1896, No. 40), in which tracheotomy was performed on a boy, aged $2\frac{1}{2}$ years, diagnosed as having laryngismus stridulus, without relief; "but when subsequently the anterior mediastinum was opened from above by extending the incision from the tracheotomy wound, a piece of the thymus as large as a hazel-nut appeared with each inspiration. The gland was drawn up with forceps and fastened by three stitches to the fascia over the sternum. The child rested quietly after the operation, had no dyspnœa, and made a complete recovery."

Similar cases are recorded by Purruicker, Erhardt, Rehn, and König.(3)

In a case reported by Carpenter (4) in a boy, aged 10 months, in whom death occurred from asphyxia, the trachea was found post mortem to be greatly compressed from before backwards by a large thyroid, but there was, in addition, diphtheritic membrane in the trachea.

Deneke (5) relates the case of a child, aged 5 years, subject for three years to attacks of syncope and blueness after fits of crying. During complete repose the face was almost normal, but with the least effort or cry the subcutaneous veins swelled up and filled the supra-clavicular fossæ, especially the left, whilst the veins in the middle line became as large as the finger. Operation was performed, the capsule of the thymus opened, and a portion of the gland as large as a pigeon's egg enucleated from each lobe. Eight months later there had been no further syncopal attacks, and the veins of the neck were markedly diminished in volume.

The three cases on which this article is based seem to afford additional evidence that, in children, death may be caused by an enlarged thymus in different ways. There can be little doubt that in the first case death was occasioned by pressure of the firm wedge-shaped thymus on the trachea at the upper opening of the thorax, and had the child come under observation rather earlier, and, on tracheotomy failing to relieve its distress, had a portion of the thymus been enucleated, as in the instances referred to above, in all probability the life of the infant would have been saved.

Case 2 was doubtless one of lymphatism, and death resulted from the condition which, since so little is known about it, it is pleasant to call "lympho-toxæmia."

The mode of death in the third case is not so clear, but there was a strong impression amongst those present at the autopsy that pressure on the great veins had in some way contributed to the fatal

result, an impression produced by the distension of the veins of the head and neck together, with an absence of the usual signs of death from asphyxia. A study of these three and of other recorded cases renders it probable that whilst the most common form of enlargement of the thymus is a true diffuse hypertrophy, or, rather, a hyperplasia of all the several elements of which the gland is composed, a condition in which obstructive effects are little likely to occur, there is, apart from malignant disease, another and less common morbid condition in which the gland becomes, as it were, tightly packed with small lymphocytes at the expense of the supporting structures, a condition in which, as a consequence of the swelling and increased firmness of the gland, pressure effects are to be feared. The subsequent history of the patients operated upon shows that neither sarcoma nor leukæmia are likely causes of the enlargement in these cases.

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- (1) FOWLER, J. S.—'Encyclopædia Medica,' 1902, xii, p. 246.
- (2) OSLER.—'Principles and Practice of Medicine,' 7th edit., 1910, p. 772.
- (3) KÖNIG.—'La Semaine Médicale,' 1909, p. 274.
- (4) CARPENTER.—'Proc. Roy. Soc. Med.,' 1909, iii, "Section for the Study of Disease in Children," p. 46.
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London Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, April the 28th, 1911.

Dr. E. CAUTLEY, *President, in the Chair.*

Von Jaksch Anæmia.—Mr. SHEFFIELD NEAVE.—The patient was a girl, aged 1 year and 10 months, who presented an enlarged spleen and liver and slightly enlarged glands in the inguinal and maxillary regions. The erythrocytes, among which were poikilocytes, normoblasts, and megaloblasts, numbered 2,570,000 per c.mm., and the leucocytes 19,300, of which 66·6 per cent. were lymphocytes. The hæmoglobin value was 40 per cent. The child showed signs of rickets, and the Wassermann reaction was present. Improvement had occurred under arsenic and iron.

Dr. J. W. CARR discussed the relationship of the disease to syphilis and rickets.

Congenital Syphilis treated by "606."—Dr. J. L. BUNCH. The boy was admitted at the Queen's Hospital for Children on January the 2nd, 1911, when fourteen weeks old. When three weeks old he developed a running from the nose, which increased until the nostrils became swollen, and a profuse muco-purulent rhinitis was present. A papular eruption also showed itself on the buttocks, thighs, soles of the feet, neck, and face. Mucous tubercles appeared round the anus and at the angles of the mouth, in which large numbers of the *Spirochaeta pallida* were found. When admitted to the hospital the child showed evidences of malnutrition. His weight was 4 kilos. He had not been given mercury in any form.

On January the 4th a dose of 0.04 grm. freshly prepared salvarsan was given intra-muscularly in the subscapular region. The dose was, therefore, one of 0.01 grm. per kilo. of body-weight. On January the 5th the temperature rose to 100° F., and there was a well-marked swelling round the point of injection. The child improved considerably from day to day, and by January the 19th the mucous tubercles, both round the anus and the mouth, had quite gone, and the snuffles had ceased. The skin was clear, except for some mottling and discoloration at the site of the previous lesions. The Wassermann reaction, however, was still positive.

Congenital Heart-disease without Murmur, and with a Family History of Congenital Cyanosis.—Dr. F. PARKES WEBER.—The patient, a girl, aged 2½ years, is said by her mother to have been weakly from birth. She easily gets out of breath, and there is cyanosis of the fingers, toes, nose, and lips, which varies in degree from time to time. No cardiac murmur can be detected, but the apex-beat is slightly displaced to the left, and by Röntgen-ray examination the heart appears to be somewhat enlarged. She cannot yet walk. The cyanosis and tendency to get out of breath date from birth. The mother, who looks a healthy woman, has had four other children, and no miscarriages. Two of the four other children were cyanotic from birth, and died at the age of five months and at the age of three days respectively. The two remaining children, aged 9½ years and 10 weeks respectively, are living, and are said to have shown no signs of heart disease. In the patient's case the existence of an aperture in the inter-ventricular septum or in the inter-auricular septum, or in both, is highly probable.

Congenital Heart Disease with Congenital Malformation of the External Ear.—Dr. F. PARKES WEBER.—The patient, a boy, aged 4 years, has a congenital malformation of the right external ear, but presents no other abnormality, excepting in regard to his heart. The right side of the heart extends somewhat too far to the right, as shown by the cardiac dulness and by Röntgen-ray examination, and there is a variable systolic murmur, best heard over the lower portion of the cardiac area, just to the left of the sternum. The murmur does not commence immediately after the first sound, but occupies the second portion of the systole, ending with a loud second sound. There is no cyanosis, dyspnoea, or oedema, and no evidence of congenital syphilis. The boy is the second of four children, and there is no history of congenital deformities in any other members of the family. He has had good health, except for whooping-cough two years ago, and

measles with "pneumonia" recently. The murmur may possibly be connected with a patent foramen ovale. Cyanosis in such cases is by no means necessary.

Chronic Pyæmia of Five Years' Duration following Suppurative Epiphysitis of the Upper End of the Humerus.—Mr. DOUGLAS DREW.—In February, 1906, the child met with an abrasion of the right knee. A week later the left shoulder became swollen, and an abscess formed, and was opened. This was rapidly followed by suppuration of the right elbow- and knee-joints, and abscesses in connection with the bones of both forearms, for which he was sent to the Queen's Hospital. During the past five years he has had thirty-eight abscesses opened. Some of them have been due to osteomyelitis, but the majority have been subperiosteal. In a few of the earlier ones there was a small sequestrum, but in the later ones no necrosis was present. The intervals between the abscesses varied from one to seven months. In 1908 a course of autogenous vaccine was given, but without any appreciable effect, and during the last twelve months he has had further injections, in spite of which he has within the last month developed two more abscesses in the forearm. The interesting feature about these last two abscesses is that no micro-organisms could be grown from them, which suggests that the poison is gradually becoming less virulent. The micro-organism found in the abscesses was the *Staphylococcus pyogenes citreus*.

The movements of the knee- and elbow-joints which suppurated are normal.

A Case of Asymmetry of the Pelvis (Naegele); Partial Suppression of Left Lateral Wing of the Sacrum; Scoliosis.—Mr. A. H. TUBBY.—A girl, aged 12 years, attended the Royal National Orthopædic Hospital in January, 1908, complaining of weakness in the back. On examination there was muscular and ligamentous weakness of the back. The left posterior superior spine of the ileum was situated at a shorter distance from the middle line than the right. On accurate measurement the distance of the left posterior superior spine of the ileum from the middle line was $1\frac{1}{4}$ in. and the right was $1\frac{5}{8}$ in.

A skiagram was taken which showed partial suppression of the left lateral wing of the sacrum.

In September, 1908, a scoliosis had developed of the dorsal spine to the right with considerable rotation backwards of the right ribs and the right scapula, with also commencing rotation in the lumbar region.

Double Congenital Club-hand of the Radio-palmar Variety, with Absence of Radius on both Sides.—Mr. A. H. TUBBY.—Patient, aged 1 year and 8 months. An unusual case, inasmuch as the development of the metacarpal bones and phalanges appears to be perfect.

Malformation of Femur.—Mr. O. L. ADDISON.—The child is aged $2\frac{1}{2}$ years. The right is smaller than the left, about 2 in. shortening. The femur is much curved, and there is a marked degree of coxa vara. The leg was first noticed to be shorter than the other when the child was ten months old. No history of injury.

Tumour on Back, probably Dermoid.—Mr. O. L. ADDISON.—A swelling the size of a fowl's egg has been present since birth in the middle

line over the lower cervical vertebræ. It is covered by normal skin, and on the apex is a small opening, from which a whitish, muco-purulent discharge occurs. In the base of the tumour there is a nodule about the size of a hazel-nut; it feels hard, like cartilage or bone, and is not fixed to the vertebræ.

A Preliminary Communication on Syphilis and Mental Deficiency.

—Dr. E. BELLINGHAM SMITH and Dr. A. W. G. WOODEFORD—A record of three cases in children, aged 1, 3, and 6 years respectively, two of whom belonged to the same family. One suffered from eclamptic idiocy and two from spastic diplegia. There was an entire absence of the usual syphilitic stigmata, but the blood of each child gave a positive Wassermann's reaction. The fathers also gave a positive reaction, but the mothers were negative. The authors came to the following conclusions: (1) Nervous lesions or mental deficiency may be the only evidence of inherited syphilis. (2) Mild unrecognised or untreated syphilis may produce the same nervous lesions in the offspring as in the parent. (3) It is important to determine the syphilitic factor in a case of mental deficiency, and institute such treatment as will prevent the occurrence of further cases in the same family. (4) The diagnosis of inherited syphilis by Wassermann's reaction alone indicates the value of the test, and suggests that more cases of mental deficiency are due to syphilis than is usually suspected. (5) The absence of a reaction in the mothers is difficult to explain. Perhaps maternal infection is not always necessary for transmission of the virus to the child; or, on the other hand, the reaction itself was not always infallible.

The cases and paper were discussed by the PRESIDENT, Dr. R. HUTCHISON, Dr. BELLINGHAM SMITH, Dr. WEBER, Dr. E. LANGMEAD, Mr. P. L. MUMMER, Mr. W. M. BURGESS, Mr. DREW, Dr. T. B. HYSLOP, and Dr. J. D. ROLLESTON.

MEDICAL SOCIETY OF LONDON.

April the 24th, 1911.

Tetany and Dilatation of the Colon (a New Syndrome).—Dr. LANGMEAD called the attention of the Society to a symptom-complex which had found no place in the literature. It consisted of three parts: (1) Intractable and relapsing tetany; (2) dilatation of the colon; and (3) unhealthy and offensive motions. In the majority of the cases there was considerable physical and mental backwardness. The tetany was peculiar in that it affected children past the usual age, and was very chronic and liable to relapse, sometimes lasting for years. It depended upon the state of the motions rather than upon the amount of dilatation, and was almost certainly due to absorption of toxins from the stagnant contents of the dilated colon, since other evidences of toxæmia, such as œdema and albuminuria, were occasionally present, fever was the rule, and relief was often obtained by washing out the colon. The dilatation of the colon was not always associated with hypertrophy, and possibly in some cases was only temporary. The paper was based on fourteen cases, seven of which showed the syndrome in its complete form; in three tetany had only been

seen once, and in the remaining four Chvostek's sign was the only manifestation of the tetanillic state. He pointed out that it was difficult to understand why only a very small percentage of children with dilatation of the colon suffered from tetany, and suggested that it might be explained either by the incidence of a specific infection or by inadequate protection due to inefficiency of the thyroid or parathyroid glands. (AUTHOR'S ABSTRACT.)

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Friday, April the 7th, 1911.

Injury to Humerus.—MR. DUNCAN C. L. FITZWILLIAMS showed a girl, aged 6 years, who had had three injuries to the lower end of the right humerus as the result of falls upon the elbow, two of which had caused partial separation of the lower epiphysis, while the third had caused severe bruising, but no anatomical deformity had been noted at the time. All the injuries had been sustained during the last three years and all had been treated with the arm in the position of extreme flexion. At the present time the function of the elbow-joint was excellent, both flexion and extension bring normal in range and the limb was as strong as its fellow. On extending the limb, however, the carrying angle was noticed to be altered and reversed. The X rays showed that the growth of the bone had been greater on the outer than on the inner side, and also showed irregularities marking the position of the epiphysis at the dates when the injuries were received.

Tuberculous Disease of the Upper Epiphysis of the Femur.—MR. O. L. ADDISON showed a boy, aged 9 years, whom he had first seen two years ago. There was a history of pain in the right hip and limping consequent on a fall six months earlier. The boy seemed healthy; the right leg was slightly wasted and one quarter of an inch shorter than the left. Flexion at the hip was as absolutely free as on the sound side; abduction, adduction, rotation and extension were absent. The X rays showed slight destruction of the inner half of the epiphysis of the femur. He had been kept in a single Thomas splint for two years and had had $\frac{1}{1000}$ mgr. tuberculin once a month. There was now half an inch shortening, rotation was free, abduction slightly limited, and flexion perfect. The X rays showed mushrooming of the epiphysis and increased thickness of the femoral neck.

Congenital Syphilitic Osteomyelitis.—MR. O. L. ADDISON also showed a child, aged 14 years, who first came under notice three years ago with a history that swellings had appeared ten weeks previously on the left arm and leg; these swellings had gradually increased in size and had then burst, leaving discharging sinuses. The child was well grown, but showed a facies characteristic of congenital syphilis. The left humerus and the lower half of the left tibia were greatly increased in size, and sinuses leading to the bone were present at the lower end of the tibia and both ends of the humerus. X rays showed a very large amount of new periosteal bone for the whole length of the humerus and lower end of tibia; clear areas close to the epiphysal lines in the medulla. Operations for removal of sequestra were done in April and October, 1908, and in July, 1909, the wounds finally

closing in May, 1910. The child had been under treatment with mercury and iodide all the time.

At present the left humerus was much thickened and was one inch shorter than the right; there were numerous depressed adherent scars. The left tibia was also thickened and irregular in its lower half and was a quarter of an inch longer than the right. Wassermann's reaction was still slightly positive.

Philadelphia Pediatric Society.

MEETING, March 14, 1911, J. TORRANCE RUGH, M.D., President.

Edebohl's Operation.—Dr. E. B. HODGE showed the kidneys from a girl of eight years, removed at autopsy six weeks after a second double decapsulation. The patient was exhibited before the Society nearly two years after the primary operation, in good health, with no albumen or casts in the urine. Six months later, following bronchitis, œdema reappeared with albumen and casts. She recovered from this and several similar attacks, but spent about nine months of 1910 in hospitals, the last four months continuously in the Children's Hospital. As she was losing ground steadily, in spite of the care and attention of Drs. Griffith and Gittings, double decapsulation was performed the second time on December 1, 1910. The main clinical facts before operation were high grade œdema, low urinary output (the daily average being four ounces), and lack of uræmic symptoms. After operation the œdema subsided, to return in less degree in ten days, accompanied by ascites. The patient was more comfortable and the amount of urine larger, but never free from albumen or casts. At operation the fatty capsule stripped off easily, showing a condensed inner fibrous surface. No definite fibrous capsule could be demonstrated, even on incision of the cortex in several places in each kidney, although the primary operation was done nearly two and a half years ago. Dr. C. Y. White reported that the microscope showed no definite capsule. There was, however, a two-thirds fibrous tissue cell layer, probably newly formed capsule. The specimens showed marked chronic parenchymatous nephritis. The left kidney weighed 154, the right 70 grammes.

Dr. E. E. GRAHAM said that in 1905 he had collected eleven cases of decapsulation of the kidneys in children for nephritis. In only one had decapsulation of both kidneys been done a second time; in a boy of ten years with chronic nephritis. He did well for twenty-one months after operation; the second operation did little if any good. There was no report of death or recovery of this case. A careful study of these cases showed that if the illness was acute or subacute, rapid improvement might follow decapsulation. Most of the reported cases occurred in hospitals, and it was difficult to continue the proper treatment after the child left the institution. Dr. Graham's patient always improved after returning to the hospital. Many operators believed that a decapsulated kidney became enveloped in a much thicker capsule than existed previous to the decapsulation, from three to four months after the operation; this apparently did not occur in Dr. Hodge's case. Of his eleven cases five died and four pro-

bably recovered; two showed no improvement. All would probably have died without operation.

Dr. A. A. ESHNER asked whether Dr. Hodge believed that the operation prolonged the life of this patient.

Dr. HODGE answered that the first operation was undoubtedly life-saving. She remained well for over two years afterwards. The second operation was not successful. In well selected acute cases the operation was certainly indicated. This child, while well in the hospital, grew worse every time she returned home. Dr. Hodge knew two other children upon whom the operation was done successfully, who kept well for five and six years after the operation. The patient was even without albumen and casts for some time.

Anterior Poliomyelitis.—Dr. R. S. McCOMBS reported a case of acute anterior poliomyelitis occurring in a child at five months of age. The permanent paralysis involved the right seventh cranial nerve, giving a typical right-sided Bell's palsy and the shoulder group of muscles of the left arm. The third cranial nerve was likewise involved early, but this paralysis cleared up. The case was reported on account of the very early age of the child and the peculiar distribution of the resultant paralyses. Dr. McCombs also called attention to the fact that in the epidemic of 1910 involvement of the brain had been observed more frequently than in previous years.

Dr. J. H. MCKEE said that he had seen several similar cases last summer. He reported these cases in detail.

Dr. HERBERT FOX said that these patients as a rule had a good family history. While the New York report indicated that diarrhoea usually was an early symptom, and this fact was noted in Dr. Combs' case, it had been his experience in two epidemics that constipation was more common. Among two hundred cases only three developed facial paralysis, which paralysis was accompanied by other paralyses. Among these two hundred twenty were cerebral cases. The New York report mentioned one case aged two years, but the history was not given. Dr. Fox had seen it in a child of three months. Monoplegia with facial paralysis was common according to foreign reports, and facial paralysis rarely cleared up in these cases, although the monoplegia might disappear. The facial paralyses were frequently permanent. Previous speakers had said that the cases of cerebral involvement, or those of the Landry type, were more common now than formerly. This had not been Dr. Fox's experience. In Western Pennsylvania in 1907 there were many cases of encephalitis diagnosed as cerebro-spinal meningitis, which naturally brought down the percentage of the encephalitic type. The greater familiarity with the disease during our last epidemic increased the number of recognised polioencephalitides.

Dr. ESHNER said that as this facial paralysis was part of an acute poliomyelitis, and of nuclear origin, it should not be regarded as true Bell's palsy, which is a peripheral paralysis.

Dr. T. H. WIESENBERG said that he did not know of a case similar to that of Dr. McCombs, in which there was not only a palsy of the seventh nerve but also of the third. In the recent epidemic he had seen more cases of cerebral involvement than previously, and thought it was especially severe. Such cases as this bore out the fact that poliomyelitis was not a disease of the spinal cord but a general infection of the whole cerebro-spinal system, and were further evidence that the pathology must be revised, and that cases of so-called superior or inferior encephalitis of Wernicke must

be included. Dr. Weisenburg thought that the twitching in the facial distribution on the side opposite the facial paralysis at the time of its onset was very interesting, and indicated that there apparently was an irritation of this nucleus; but this could be easily accounted for by the fact that these nuclei were close together.

Intracranial Pressure.—Dr. HARRY LOWENBURG showed a boy of nine years whom he had first seen when eight years old. He had then had severe headache for ten days. His head was large. The slightest motion caused pain; temperature was subnormal. Removal of adenoids afforded no relief. Eye examination by one ophthalmologist, November 29, 1909, showed no evidence of central pressure. Another ophthalmologist saw the boy December 6 and found double optic neuritis on making the diagnosis of brain tumour. The first ophthalmologist saw him again December 7, and found evidence of hæmorrhage. This showed how rapidly the optic changes occurred. X-ray examination of the head proved nothing. Upon potassium iodide and bichloride of mercury all symptoms disappeared. Dr. Lowenburg considered the cause of the intracranial pressure to have been either specific disease or an acute exacerbation of a chronic or arrested internal hydrocephalus. He believed the latter to be the correct diagnosis.

Brain Tumours in Children.—Dr. T. M. WEISENBURG said that they were rare in childhood. In a collection of about forty, only two occurred in children below twelve; but quite a number occurred in young adults, especially girls, between fifteen and twenty years of age. Of the tumours seen in consultation or hospitals during ten years of neurological practice, he had seen only five in children under twelve years, and these were either glioma or tuberculoma occurring in the brain stem or cerebellum. The other forms of tumour were rare. Occasionally, as in one of his specimens, cerebrospinal meningitis might leave as a terminal phase an abscess in the pia, but this was most unusual. The symptoms did not differ from those presented by adults, with the exception that if they occurred in children below four years of age the symptoms were difficult to elicit, and one was dependent upon the demonstration of choked disc, the occurrence of Jacksonian convulsions and paralysis. Inasmuch, however, as most tumours occurred in the pons or cerebellum there would be such symptoms as paralysis of associated ocular movement and inco-ordinate gait. Internal hydrocephalus occurred probably more often in children than brain tumours. The symptoms were those of general increase of pressure with choked disc, but a differential diagnosis from tumours could not be made. It could be stated, however, that tumours generally caused death, whereas in internal hydrocephalus recovery could be expected either with or without treatment.

Dr. ESHNER said that cerebral tumours occurred rarely in childhood because tumours in general were rarely found in children.

Dr. W. S. CORNELL referred to a case, considered simply as a bad boy, in whom choked disc was found. Operation for intracranial pressure was performed, and the greater part of the cerebellum protruded and was lost. The symptoms of badness disappeared and the boy lived for some time. Intracranial pressure undoubtedly affected the boy's temperament.

Dr. WEISENBURG thought Dr. Lowenburg's case one of internal hydrocephalus, since the general symptoms of tumour with marked choked disc disappeared so rapidly. He had seen several such cases in children and adults, the symptoms disappearing, leaving only slight atrophy of the optic

nerves. In closing the discussion Dr. Weisenburg emphasised the rarity of tumours in children, and the fact that they were either tuberculous or gliomatous, and not gummatous as is the opinion of so many.

Non-diphtheritic Exudates.—DRS. S. S. WOODY and J. A. KELMER reported the results of study upon a series of cases treated in the wards of the Philadelphia Hospital for Contagious Diseases. All cases sent to the diphtheria and scarlet fever wards were cultivated on admission. When negative for Klebs-Löffler bacilli, special studies were made to determine the cause of the exudate. They divided their work into four groups: Vincent's, pneumococcic, streptococcic and staphylococcic anginas. Twenty-four cases were Vincent's angina, three being sent in with the diagnosis of diphtheria. Clinically they occurred in two groups, one characterised by a dirty yellow or brownish exudate with well-marked ulceration and sloughing covering the tonsils, uvula and soft palate; the other group of cases, frequently overlooked, attacked the gums. They bled easily, were easily separated from the teeth, and presented various degrees of ulceration along their free margin. This infection was easily diagnosed by bacteriological methods. Direct smears, stained with gentian-violet and carbol-fuchsin showed the fusiform bacilli and spirilla causing the infection. The fusiform bacilli could be grown in pure culture, and probably represented early forms of the spirilla. Seventy-four cases were pneumococcic, and were interesting since this infection was so frequently overlooked. Clinically they were divided into three main groups, cases with well-marked tonsillar exudates, cases showing redness and œdema of the parts without an exudate, and a rarer type characterised by the presence of a perforating ulcer of the soft palate and ulcers of the buccal mucosa. The clinical picture varied and a clinical differential diagnosis from diphtheria could not be made with any degree of accuracy. As pneumococci are found in about 50 per cent. of healthy mouths, great caution was necessary in making bacteriological diagnosis. The diplococcus was frequently difficult to cultivate and differentiate from similar organisms. Smears were studied, cultures made on coagulated blood serum and isolation accomplished by streaking in plain and dextrose blood agar. Pure cultures were then stained for capsules and inoculated into inulin and lactose serum-water mixtures of Hiss and inulin bouillon of Duval and Lewis for acidity and coagulation. Typical streptococcic exudates were seen in scarlet fever; this might resemble diphtheria very closely. Of 1404 primary cultures of scarlet fever cases on admission, 214, or 15.24 per cent. showed the presence of diphtheria bacilli. Scarlet fever predisposed to diphtheria and the latter infection could be excluded only after repeated cultures had been made. Of 447 cases sent in as diphtheria, 5.59 per cent. were purely streptococcic. A staphylococcic exudate might also present the clinical appearance of diphtheria. One negative culture did not exclude the possibility of diphtheria, for in 20 to 30 per cent. of cases there was superimposed upon the diphtheritic membrane a secondary infection. Two or more cultures should be made, and the method of cultivation was important. They concluded that, while a typical case of diphtheria was readily recognised, there were other infections capable of producing deceptive diphtheria-like exudates; likewise diphtheria might give the clinical picture of lacunar tonsillitis. Those having the largest experience have been taught to be most cautious in making clinical diagnoses. Neglect to cultivate was one important reason why many cases of true diphtheria were treated as tonsillitis, and the disease thereby spread. Laboratory

methods were of considerable value in diagnosing these infections. To be of most value, the laboratory findings and the clinical observations must be used conjointly.

Dr. KOLMER added that Vincent's angina, which ought to be called Plaut's angina, could readily be diagnosed by a smear. The spirilla seemed to be a later form of the fusiform bacilli. It was very difficult to isolate pneumococci: they produced a peculiar ulceration of the uvula and buccal mucosa, especially with scarlet fever. Secondary infections might conceal diphtheria underneath.

Dr. H. L. HULL said that smears made at the time of cultivating readily showed Vincent's angina. The pneumococcic exudate was easily detached, leaving a clean surface. A patched uvula should cause antitoxin to be given at once. The guinea-pig test would show the virulence of the bacilli found. A severe sore-throat usually showed mixed infection; pain was not a prominent symptom in pure diphtheria.

Dr. FREDERICK FRALEY said that in his experience fusiform bacilli were almost always found easily in smears from cases of Vincent's angina, but that the presence of spirilla alone could not be considered at all conclusive, owing to the numerous organisms of that type occurring in practically normal mouths.

Dr. J. CLAXTON GITTINGS asked Dr. Woody whether pneumococcic exudates occurred primarily or with other infections.

Dr. D. J. M. MILLER emphasised the necessity of cultivating all sore-throats; also the importance of making more than one culture in all cases. He thought the younger men should familiarise themselves with cultural methods, especially those who practised at a distance from laboratories and city Health Boards. Marked constitutional symptoms, such as fever, prostration, etc., denoted mixed infection rather than pure diphtheria, as much as pain did.

Dr. ELEANOR C. JONES spoke of an irregular case of diphtheria that had recently occurred in her private practice. The throat was generally injected but there was no exudate on the tonsils or uvula, only a slight greyish film on the throat anterior to the pillars of the fauces. Cultures were pronounced positive both by the Bureau of Health and the Bacteriologist of the Women's Hospital. Antitoxin was promptly administered, but it did not affect the throat condition, although it promptly relieved the general symptoms of the disease. Such a case was most embarrassing to the physician, because of the uncertainty of the clinical diagnosis.

Dr. ALFRED HAND, Jun., said that the paper was of special interest to those who could recall the time when the bacteriological diagnosis of anginas was first adopted, which was also the time when antitoxin was introduced. The opponents of antitoxin, who could see no value in it, advanced the argument that the improvement in the death-rate was really caused by a stretching of the realm of diphtheria, through the use of cultures, to include many mild cases which formerly would not have been called diphtheria. There was a certain amount of truth in this criticism, and it was really necessary to do as suggested by Dr. J. M. Da Costa in a private conversation about a case in which Klebs-Löffler bacilli had been found:—"If that case was diphtheria, then it seems to me that we must revise our whole conception of the disease." So, while cultural diagnosis brought into diphtheria some mild cases, yet it probably, according to the author's results, excluded an equal number of cases clinically suggestive of diphtheria. If any defence of antitoxin were needed, an impregnable one would be found

in the results of the cases sent into the hospital as diphtheria in which the cultures are negative, the antitoxin administered on admission protecting those patients from developing the disease to which their environment exposed them. Certainly in pre-antitoxin days the admission of several hundred negative cases into diphtheria wards would have had a decided influence in raising the death-rate. And the fact that so many negative cases were sent to the hospital emphasised the importance of culturing all cases of tonsillitis.

Dr. WOODY stated that perforating ulcer occurred in severe cases of scarlet fever and was pneumococcic. The pneumococcic exudate was thin, separated without difficulty, and did not leave a bleeding surface. It was accompanied often by a peculiar pinkish or carmine colour of the buccal mucosa and lips. The same carmine colour might also be noted on the face and chest.

Dr. WHITE added that the smears made from cultures sent to the laboratory of the Board of Health were kept for three months, so that any physician could find out the exact nature of his cultures. Cases such as Dr. Jones reported occurred daily; a guinea-pig test would probably have shown virulent bacilli. These cases should be isolated as long as the throats showed bacilli.

Société de Pédiatrie, Paris.

March the 21st, 1911. (Bulletin No. 3.)

Emotional Jaundice in Children.—M. NOBÉCOURT related a case of long duration in a boy, aged 11 years, and M. MERKLEN a similar case in a girl, aged 8 years. In each case a severe fright or fit of anger was followed in three days by vomiting, anorexia, altered stools, and jaundice.

Lymphocytosis of the Cerebro-spinal Fluid in Chorea.—MM. RICHARDIÈRE, LEMAIRE, and SOURDEL read a paper on this subject based on fifteen cases—five in boys and ten in girls. In eleven the movements were more marked on one side, in eight on the right, and in three on the left; in six the patellar reflexes were exaggerated; in four there was combined flexion of the thigh and trunk; in one Babinski's sign was marked; in ten there was distinct hypertension; in seven increase of the normal amount of albumin; and in twelve a variable amount of lymphocytosis. Three were benefited by lumbar puncture, but in one instance the improvement was preceded by somewhat alarming symptoms. Examination of the cerebro-spinal fluid revealed a marked lymphocytosis in cases of true chorea, and was more constant than many of the signs of organic lesions hitherto described. Lumbar puncture was attended by no special dangers, and might in certain cases benefit the chorea and hasten recovery.

Disturbances of "Diadokokinesis" in Chorea.—M. MARFAN read a paper on the disorders of motility in this disease. He considered them constant and easy to demonstrate. The normal subject is capable of executing alternating movements in rapid succession, as for example, pronation and supination of the hand. Babinski called this function "diado-

cokinesis," and located its seat in the cerebellum. According to him the abolition or perversion of this function, "adiadocokinesis" or "dysdiadocokinesis," was an indication of change in the cerebellum, and proved that the cerebellum, or at least the fibres which joined it to the cerebral cortex, were involved in the choreic process, and favoured the organic nature of this disease. In ordinary chorea diadocokinesis was invariably disturbed, and in a marked and lasting manner. If the patient were told to put his forearms in the upright position, with the hands up, and to make rapid alternative movements of pronation and supination the following was observed: On the side least affected the patient nearly succeeded in making some alternative movements more or less regularly and fairly quickly; on the other side in which the chorea predominated he could not do this, but made two or three slow and irregular movements, and then stopped. The want of symmetry between the movements of the two hands allowed this kind of disturbance to be easily noticed. The presence of the sign was also of real clinical interest, and allowed an estimate to be formed of the evolution of the chorea. It appeared early, lasted throughout the disease, and persisted a longer or shorter time after apparent recovery. Chorea lasted much longer than the classic signs indicated, not for weeks only but at least two months, often three or four months; its long course was marked by periods of amelioration and aggravation. During periods of remission a cure seemed imminent, but shortly afterwards the disordered muscular movements became as marked as at the onset, and a fresh outbreak occurred. When recovery was delayed the dysdiadocokinesis always persisted in a marked degree; as long as it was present a relapse might occur. The patient must never be pronounced cured until this sign could no longer be elicited.

Tracheo-bronchial Adenopathy and Hypertrophy of the Thymus.

—M. AVIRAGNET related a case of mediastinal adenopathy in which were noticed during life all the signs usually attributed to hypertrophy of the thymus: inspiratory stridor, dulness at the upper end of the sternum, a retrosternal swelling seen on expiration, a radiograph shadow in the same situation, and dyspnoea incompletely relieved by intubation. The symptoms were due, not to mechanical compression of the trachea and bronchi by the glands, but to pressure on the nerves. (Woodcuts are given in the 'Bulletin').

M. MARFAN divided cases of chronic dyspnoea with stridor into three groups: (1) Stridor exclusively inspiratory, *i. e.* congenital vestibulolaryngeal stridor, and stridor from paralysis of the dilators of the glottis; (2) inspiratory and expiratory stridor, more marked, however, during inspiration, generally due to thymic tracheal stenosis; (3) stridor, exclusively expiratory, or more marked during expiration, apparently caused by tracheal stenosis or glandular bronchial stenosis. In M. Aviragnet's case an adenopathy gave rise to a stridor almost exclusively inspiratory, and the autopsy showed there was pressure on the nerves rather than on the trachea on bronchi. He would therefore place the case in the first group.

Ten Cases of Thyrectomy.—M. VEAU reported these cases, arranged in four groups: (1) Dyspnoea with or without signs of suffocation; immediate and complete recovery; (2) congenital stridor, vestibular and thymic, the latter alone requiring operation; (3) spasm of the glottis; in one fatal case, not operated upon, an enormous thymus was found; (4) tracheo-bronchial adenopathy, in which operative results were unsatisfactory.

An interesting discussion followed.

VINCENT DICKINSON.

Abstracts from Current Literature.

Medicine.

Diabetes mellitus in children (*Norsk Mag. f. Lægevid.*, 1910, LXXI, p. 1078).—**T. Langaker** records seven fatal cases in children aged from four to eleven years. Five occurred in the same family within the space of nine years; the first four died in four years. The duration of the illness ranged from two to ten months (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, VI, p. 325). On two a necropsy was performed: in one nothing was found beyond slight fatty degeneration of the kidneys; in the other the pancreas alone showed any morbid change, consisting in parenchymatous degeneration and an overgrowth of the connective tissue. There was no history of tuberculosis, nervous diseases, or diabetes in the parents or grandparents in any of the cases.

J. D. ROLLESTON.

Continued subnormal temperature in infancy (*Journ. Amer. Med. Assoc.*, 1910, II, p. 822).—**Cheney** classifies the causes of continued depression of temperature in infants as—(1) Insufficient heat production; (2) excessive heat loss; (3) disturbed heat regulation; (4) diseases of metabolism. Under the first heading come those cases due to starvation or stenosis, to infantile atrophy or athrepsia, to prematurity and to inanition; under the second those caused by loss of body fluids, as in severe diarrhoeas or hæmorrhages, and perhaps also in certain skin diseases; under the third head those occurring in diseases of the heart or nervous system, and those due to drugs, unconsciousness or intoxication; the fourth head includes such diseases as anæmia, diabetes, and myxœdema. The writer records the case of a 3-months-old infant, who suffered from inanition and some gastrointestinal indigestion. The latter soon cleared up, but for nearly five months the temperature was more or less continuously subnormal, once reaching 89° F. and frequently 92° F. and 93° F. The child on admission weighed 4½ pounds but had only gained 1½ pounds when discharged.

T. R. WHIPHAM.

Creatinin and creatin metabolism in children (*Journ. Amer. Med. Assoc.*, 1910, II, p. 1178).—**Sedgwick** upholds the view that creatinin is excreted by infants, and finds that it is present in the liquor amnii, which may mean that its excretion begins before birth. Creatinin is always in the urine during the first week and in a concentration approximately that of adult urine. Creatin is also excreted during infancy. In later infancy creatinin is present in the urine uniformly, but in a more dilute condition than in the case of adults or during the first week. The best and simplest test for these substances is that of Folin. With picric acid and sodium hydrate creatinin gives a brownish-red colour like a solution of potassium bichromate. The urine is treated with these reagents and the depth of colour is compared with that of a half normal bichromate solution, the creatinin content being determined by means of a colorimeter. Creatin may be estimated by boiling it with hydrochloric acid and thus converting it into creatinin, the amount of which is then determined as above. By the study of creatin and creatinin some help may be obtained as to the processes of nitrogen metabolism in disease.

T. R. WHIPHAM.

Gastric ulcer in children ('*Charlotte Med. Journ.*,' 1911, p. 89).—**W. O. Nisbet** states that in the medical literature up to 1900 there were on record only three cases of peptic ulcer in children, described, one by Rehner, one by Colgan, and one by Holt. Possibly the reason for the rarity of simple gastric ulcer in children was that they subsist largely on milk, the best acid-combining food. He reports four cases. The first, a patient aged 8 years, had suffered from repeated attacks of indigestion and epigastric tenderness. Twice whilst under observation small amounts of blood were vomited. Case 2, a boy, aged 8 years, had also experienced attacks of epigastric pain and tenderness, nausea and vomiting. On one occasion a tablespoonful of dark blood was vomited. In the third case, a boy, aged 9 years, similar attacks occurred and considerable hæmatemesis. He was also the subject of uncinariasis. The last case, that of a girl, aged 7 years resembled the others, but she succumbed, apparently as the result of perforation following the administration contrary to orders of half an ounce of Epsom salts. The first case was of three months' duration and could be called acute; the remainder were of eighteen, twenty-four, and thirty-six months' respectively. He thinks that it is possible that gastric ulcer in children from five to ten years of age is commoner than is generally supposed, and that under the names "chronic gastritis" or "acute indigestion," cases of gastric ulcer are erroneously included.

FREDERICK LANGMEAD.

Duodenal ulcer in an atrophic infant ('*Hospitalstidende*,' 1911, LIV, p. 35).—**P. Hertz** alludes to the recent paper of Helmholtz (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, VII, p. 225), and records a personal case in a baby, aged 7 weeks, admitted to hospital for acute gastro-enteritis. Death took place one month after admission, one and a half days after profuse melæna. At the necropsy an oval ulcer $1\frac{1}{2}$ cm. long and $\frac{3}{4}$ cm. broad was found in the first part of the duodenum. Microscopically the base of the ulcer was formed by the submucosa, which showed much fibrous thickening and diffuse round-celled infiltration.

J. D. ROLLESTON.

Case of congenital occlusion of the duodenum (accompanying a deficiency of the hind-gut), with a note on the ætiology ('*Glasgow Med. Journ.*,' 1910, II, p. 116).—**Arnold H. Gray** records a case of this comparatively rare affection and gives details of the conditions found post mortem. He analyses the records of nineteen cases. According to the anatomical character of the lesion in the duodenum the nineteen cases seem to divide themselves into three main groups. In the first group are three cases (including the author's) which present a type in which there is actual interruption of the continuity of the bowel. In these the upper portion of the duodenum forms a *cul-de-sac* completely separated from the remainder of the intestine. The second group is composed of twelve cases in which the obstructing lesion in the duodenum takes the form of a septum of mucous membrane, or mucous membrane plus muscular fibres, stretched transversely across the lumen of the gut, with the result that the portion of the bowel immediately above the obstruction is distended, while that below is collapsed and small. The third group comprises only four cases, and the lesion in these is of the nature of an annular constriction obliterating the lumen of the duodenum.

J. ALLAN.

A case of dextrocardia ('*Med. Record*,' 1910, I, p. 1095).—**G. Richter** and **C. H. Weinsberg**.—The patient was a girl, aged $14\frac{1}{2}$ years, who until

the illness for which she came under observation had always been healthy, and had never been examined by a doctor. On November 3, 1909, she contracted influenza, followed by persistent pulse-rate of 120, and muscular pains ascribed to polymyositis universalis. On January 4, 1910, she became acutely ill, and examination of the chest revealed a condition of dextrocardia, the apex-beat being visible about half an inch to the right of and above the right nipple. The breast-sounds were normal. There was no transposition of the liver or other viscera, and no other malformation. Signs of fluid developed in the lower part of the right axilla, and a needle removed about four ounces of bloody serum. The sputum contained tubercle bacilli. Death occurred suddenly on January 7. The fact that the fluid occurred on the same side of the chest as the heart and did not displace to the other side, but tilted it upwards, seemed to indicate the existence of additional anomalies within the mediastinum. The condition of the heart was congenital. The terminal illness was apparently a relapse of the influenza, associated with acute tuberculosis. No autopsy was held.

FREDERICK LANGMEAD.

Persistent patency of the ductus arteriosus, stenosis of the isthmus of the aorta, with degeneration of the coronaries, of the cardiac muscle, and of the sinu-auricular bundle (*'Med. Record,'* 1910, I, p. 1071, "*Proc. Amer. Med. Assoc.*").—**Kate C. Head**, who showed this specimen, said that the heart had been noticed to be defective first at the age of ten, when an attack of measles brought to notice the signs of mitral incompetence and aortic stenosis. The congenital lesion was overlooked for many years. The heart became further weakened by repeated attacks of influenza, and the patient died from rupture of the right auricle at the age of twenty-five. Out of 400 cases of congenital cardiac defects, Abbott found 106 cases of patency of the ductus arteriosus in combination with other cardiac abnormalities.

FREDERICK LANGMEAD.

Congenital disease of the heart (*'La Pediatria,'* 1910, XVIII, p. 493).—Those interested in this subject will find here an interesting contribution by **F. Visco**, with an extensive bibliography. Two cases are recorded at length, one with cyanosis, and the other without. The author says that the physician, when confronted with these cases of congenital disease, should not lose courage even in those which appear hopeless, and should spare neither time nor trouble in seeking to prevent death. If therapy is powerless on account of its limitations a large field is open for the study of prognosis, diagnosis, and prophylaxis, not only in theory, but in practice.

VINCENT DICKINSON.

Patent ductus arteriosus (*'Univ. of Pennsylv. Med. Bull.,'* 1910, XXIII, p. 509).—**Goodman** reports the case of an undersized boy, aged 14 years, with no cyanosis or polycythæmia. The heart was enlarged and the apex-beat forcible. In the second left interspace was a localised fine thrill, synchronous with systole, and in this area a loud rasping systolic murmur was heard, followed by an accentuated second sound. At the apex was a systolic murmur conducted into the axilla. A skiagram showed enlargement of the ventricles and a parasternal shadow on the left side between the second and fourth ribs. The account of the case is followed by an extensive survey of the literature of the subject.

T. R. WHIPHAM.

Heart-block as a result of primary tumour of the heart in a child aged 5 years (*Liverpool Med.-Chir. Journ.*, 1910, xxx, p. 327).—**H. Armstrong** describes this case up to that date. It is now completed to the day of the boy's death, and translated into German by **J. G. Mönckeberg** (*Deutsch. Arch. für klin. Med.*, 1911, cii, p. 144), with a description by the latter of the heart on post-mortem examination. The case was first diagnosed as tuberculous meningitis, then as meningismus, and finally as Adams-Stokes' disease. Mönckeberg found a lymphangio-endothelioma of the atrio-ventricular node, and careful examination of the whole heart microscopically showed that the interruption of continuity between the auricle and ventricle was due to a total destruction of the auricular section of this node as well as of the auricular muscle, the anterior section being intact. The case seems to be unique in medical literature both on account of the age of the patient and the post-mortem findings.

F. R. B. ATKINSON.

A new, constant and early sign of meningitis (*Gaz. des Hôp.*, No. 59, 1910. Abst. *Interstate Med. Journ.*).—**L'Hardy** draws attention to Signorelli's sign in meningitis. This consists of pain upon pressure over a point situated behind the jaw, below the ear and in front of the mastoid process. It is said to be present in all cases of meningitis, to appear early even before Kernig's sign or cervical rigidity, and to be one of the last manifestations to disappear. Some manifestation is present even when the patient is comatose, but it is most marked during the irritative stage.

T. R. WHIPHAM.

The importance of chemical examination of the cerebro-spinal fluid in the diagnosis of meningitis (*Ann. de Méd. et Chir. inf.*, 1910, p. 191).—**MM. L. Bousquet** and **M. Mestrezat** relate two cases which show the utility of a chemical analysis. The first was a girl, aged 28 years, who had severe headache, vomiting, obstinate constipation, delirium, restlessness, slight orbicular paralysis, and brisk reflexes. There was some thickening at the apex of the right lung. Tuberculosis of the meninges was diagnosed in spite of the absence of certain signs, such as Kernig's, and examination of the cerebro-spinal fluid seemed to confirm this, as lumbar puncture withdrew under marked tension a clear fluid containing a few lymphocytes. Chemical analysis, however, showed albumin '09, sugar '21, NaCl 7'24, dry extract 10'30, ash 8'35 per litre. A second puncture gave albumin '14, sugar '64, NaCl 7'52, dry extract 10'75, ash 8'75. These figures differ markedly from those obtained in tuberculous meningitis, which are—albumin 1 to 2, sugar '15 to '20, NaCl 5 to 6, dry extract 10 to 12, ash 8'20. The patient recovered completely. The second case was that of a boy, aged 4 years, who had for eight days presented signs which indicated meningitis—violent continuous headache, delirium, restlessness, vomiting, constipation, photophobia, vasomotor disturbances, and cardiac arrhythmia. The suddenness of the onset, with sore throat and nuchal rigidity, suggested a cerebro-spinal meningitis. Lumbar puncture was done and an intra-arachnoid injection of 3 c.c. electrargol given. But while the cytological examination showed the existence of an almost pure lymphocytosis which suggested a tuberculous meningitis, chemical analysis rather pointed to a cerebro-spinal meningitis: Albumin 6'50 per 1000, NaCl 6'59, dry extract 17'62. The solution of the problem was interesting. The first lumbar puncture produced a marked amelioration. A few minutes after, the headache, which had been agonising, disappeared, and the next day the child was playing in his bed and there was no longer

any nuchal rigidity or digestive disturbance. But ten days later recrudescence of the fever, headache and anorexia seemed to indicate a relapse. A fresh lumbar puncture and injection of electrargol were followed by a fresh success. Fifteen days later a third puncture was done under the same conditions. The issue of the case is not recorded.

VINCENT DICKINSON.

Typhoid meningitis ('*Med. Record*,' 1910, II, p. 760).—**Benjamin Schwartz** reports a case of acute meningitis due to *B. typhosus* in a boy, aged 8 years. The symptoms pointing to meningitis developed under observation, causing death within four days. Clinically the case resembled one of tuberculous meningitis, but both that condition and meningismus were excluded by an examination of the cerebro-spinal fluid. This was turbid, under great pressure, and free from any contaminating blood. In a smear preparation a large number of bacilli were found, which were proved by cultural and agglutination tests to be *B. typhosus*. The cells in the cerebro-spinal fluid were not accurately counted, but there appeared to be a relatively large number of small lymphocytes. No post-mortem examination was permitted. The author refers to the possibility of error in diagnosis where the cerebro-spinal fluid is contaminated with blood from which a growth of organisms might be obtained in the absence of meningitis. If, however, many organisms are found in a smear-preparation of recently withdrawn fluid, this precludes their being due only to contaminating blood. Short descriptions of other reported cases are given.

REGINALD MILLER.

Post-basic meningitis cured by intra-spinal injections of Dopter's serum ('*Journ. de Méd. de Bordeaux*,' 1910, XL, p. 513).—**Auché and Chevalier** record a case in an infant aged 23 months. The symptoms were well marked; the cerebro-spinal fluid was turbid and contained 76 per cent. of polynuclear leucocytes, and a pure culture of Weichselbaum's bacillus was obtained from it. Ten c.c. of Dopter's anti-meningococcal serum were injected into the spinal theca, followed by similar injections two days later, and again after a similar interval; as the child seemed to improve further doses were given every other day till 90 c.c. had been given. The turbidity of the cerebro-spinal fluid lessened and it finally became clear, the temperature lowered, and in three weeks the child was cured, all the symptoms having disappeared. After the eighth injection the cerebro-spinal fluid contained only cellular *débris*.

J. PORTER PARKINSON.

Coccidioidal meningitis ('*Journ. of Amer. Med. Assoc.*,' 1910, II, p. 1730).—**Ryfkogel** reports the case of a boy, aged 2 years, who had suffered from numerous subcutaneous abscesses and inflammation of the right ankle-joint. Both tuberculosis and syphilis had been suggested as a diagnosis. When seen he had twenty subcutaneous abscesses in various stages, and in the pus the characteristic round, double-contoured bodies of the fungus coccidioides were found. With treatment he remained free from abscesses for a time but later developed signs of meningitis. It was doubtful whether it was due to the fungus or to epidemic cerebro-spinal meningitis, and the results of lumbar puncture were inconclusive. Forty-five c.c. of Flexner's serum were injected without benefit, but after a subsequent injection the child became worse and died in thirty-four hours. Post mortem the lateral ventricles were dilated and a pinkish exudate was present over the base of the brain and medulla oblongata. Numerous

tubercles were seen, consisting of giant-cells, endothelioid cells and lymphocytes, with a marked tendency to fibrous tissue formation. Many of the giant-cells contained young forms of the fungus coccidioides, and cultures showed a typical growth of the organism. It seems probable that death was due to an anaphylactic reaction following the second injection of serum.

T. R. WHIPHAM.

Influenzal meningitis (*'Trans. Chicago Path. Soc.,'* 1910, *'Journ. of Amer. Med. Assoc.,'* October 29, 1910, p. 1560).—**Davis** records seven cases of this rare disease in children between the ages of five days and thirteen months. This form of meningitis occurs mostly in very young children, and might be confused with other forms unless studied carefully by bacteriological methods. It is a highly, and usually rapidly, fatal disease, the mortality being about 90 per cent. The author's cases occurred at a time when there was an epidemic of influenza. The symptoms present nothing unusual or peculiar. The cerebro-spinal fluid is turbid and contains many polymorphonuclear leucocytes as well as the characteristic bacilli, which are best stained with carbo-fuchsin. Cultivations are only successful on media containing blood or hæmoglobin. Post-mortem there is usually a rich purulent exudate at the base of the brain. It is believed that infection takes place by way of the nose. Only about forty cases have been recorded previously.

T. R. WHIPHAM.

Influenzal meningitis (*'Monatsschr. f. Kinderheilk.,'* 1911, ix, p. 549).—**G. Simon** has collected forty-one cases in which the diagnosis was confirmed by bacteriological examination, including two personal cases in children aged seven and eight months respectively. Twenty-seven occurred in the first year and six in the second. Thirty-seven were under ten years of age. The total mortality was 90 per cent. Thirty-one deaths (94 per cent.) occurred in the first two years, of which twenty-six (96·3 per cent.) were in the first year.

J. D. ROLLESTON.

Meningitis in mumps (*'Paris Méd.,'* 1910, i, p. 35).—**C. Dopter**, during five years' observation at the Val-de-Grace military hospital in Paris, has seen 158 cases of meningitis among 1705 patients suffering from mumps (9·8 per cent.). As a rule the meningeal symptoms are ill marked. Headache, bradycardia and mydriasis are often the only symptoms. Sometimes, however, severe and even fatal cases occur, of which Dopter records an example and quotes other cases in the literature. Examination of the cerebro-spinal fluid shows a lymphocytosis, which may be slight, but is often very marked. The meningitis may be complicated by hemiplegia and aphasia or palsies of the cranial and spinal nerves. The meningitis of mumps is distinguished from tuberculous meningitis by its sudden onset, and from epidemic cerebro-spinal meningitis by the character of the cerebro-spinal fluid.

J. D. ROLLESTON.

The incubation period of acute anterior poliomyelitis (*'Rev. of Neurol. and Psychiat.,'* 1911, ix, p. 10).—**D. W. Currie** and **Edwin Bramwell**.—The observations recorded and conclusions arrived at may be summarised as follows: *The Harvieston Epidemic*.—The Home Farm of Harvieston is situated on the private estate of that name in the county of Clackmannanshire, two miles from the town of Tillicoultry (population, 3600). It lies at some distance from the public thoroughfare. The farmstead consists of four

houses, which may be conveniently designated A, B, C, and D. House A is occupied by the factor or land-steward, the three adjacent cottages by farm employees and their families. The A family consists of 2 children (A. A—, aged 5 years, and B. A—, aged $2\frac{1}{2}$ years). The B family consists of 4 children (A. B—, aged $7\frac{1}{2}$ years; B. B—, aged $5\frac{1}{2}$ years; C. B—, aged 4 years; and D. B—, aged 7 months). The C family consists of 4 children (all above 8 years of age). The D family consists of 2 children (aged 2 years and a few months respectively). Five of the children in these four houses were attacked (A. A—, B. A—, A. B—, B. B—, and D. B—). The children were taken ill in the following order: B. B— (September 12), A. B— (September 16), D. B— (September 18), B. A— (September 20), and A. A— (September 24). A. A— and A. B— were typical examples of the disease. The remaining three were undoubtedly abortive cases due to the same morbid process. A. B— and B. B— slept in the same bed, while on and after September 14 they slept in the same room as D. B—. A. A— and B. A— slept in one room. Mrs. A— visited the B—s' house on September 16 and again on the 18th and 19th, and on the two dates last mentioned she remained in the house for several hours assisting to nurse D. B—. The suggestion is, after considering the negative evidence, that Mrs. A— carried the infection. The authors offer no explanation to account for this local outbreak, although they remark that the disease has been more common in many parts of the country during the past autumn than for some years past. *Conclusions*: (1) The cases described are characteristic of the epidemic type of acute anterior poliomyelitis. (2) The facts recorded afford very suggestive evidence to the effect that the disease is contagious, and that the incubation period in the cases described was four days or less. (3) The instance here reported, although not conclusive, supports the view that the infection may be carried by a third person.

AUTHORS' ABSTRACT.

Report of Epidemiology Sub-Committee on the New York epidemic of 1907 (*Pediatrics*, Special Poliomyelitis Number, 1910, xxii, p. 512).—**Coulter**.—The 1907 epidemic of poliomyelitis centred in New York City, where some 2500 cases occurred; it spread rapidly along ordinary routes of travel, and appeared in Boston and other parts of Massachusetts. In New York City an unusual proportion of cases occurred on the east side of Manhattan Borough; the reason for this is not known. It was impossible to discover any susceptibility to the disease according to race; the very few (2 out of 750) cases among negroes is remarkable. An unusually large proportion of cases occurred in young children. In the city the epidemic began in June and reached its height in September; the onset of the country cases was generally somewhat later. The disease was moderately communicable. The path of infection could not be determined. The disease was distinctly less virulent in the New York epidemic than in other epidemics, as shown by low mortality and the small number of adults affected. Though the probable average incubation period cannot be defined it may be considered less than ten days.

J. E. BULLOCK.

An epidemic of infantile paralysis in Anjou (*Paris Méd.*, 1911, i, p. 484).—**Denéchau** and **Grosgeorge** report an epidemic of nine cases, observed in August, September, and October, 1910. The authors believe in the contagiousness of the disease either by direct contact, or by "germ carriers." The incubation period extended in two cases to twenty-two days,

the usual period being fifteen days. The disease followed cerebro-spinal meningitis in three cases.

F. R. B. ATKINSON.

Myositis ossificans (*Med. Record*, 1910, II, p. 646).—R. A. Elliot records a case in a girl, aged 17 years, who showed symptoms of the disease at two years. There was wide-spread involvement of the muscular system, resulting in many deformities and much restriction of movement. The general health had not been greatly affected. Congenital malformation of hands and feet existed, as in about 75 per cent. of the published cases. This is the hundred and second case recorded since the first case was discovered by Fuke in the 'Philosophical Transactions' of 1740.

J. D. ROLLESTON.

Myositis ossificans (*Allg. Wien. med. Zeit.*, 1910, LV, p. 363).—Péteri said the child had been two years under observation and was becoming progressively worse. The most diverse muscles were undergoing ossification. The muscles of the neck, especially the sterno-mastoid, the muscles of the thorax, chiefly the pectorals, and the back muscles had plates of ossification. Bony masses could be felt throughout the length of the biceps and brachialis anticus; in the abdomen the external oblique was strongly ossified.

M. D. EDER.

Progressive muscular dystrophy (*St. Petersburg. med. Woch.*, 1910, XXXV, p. 288).—Hörschelmann showed a child, aged 8 years; the gait was never normal, but only after the third year did the mother notice a gradual deterioration. All the trunk muscles were slightly atrophied, especially the back, chest, and shoulder muscles. The calf muscles were in part hard, in part doughy; the right calf was $27\frac{1}{2}$ cm., the left $26\frac{1}{2}$ cm. in circumference. The forearm muscles were normal. Knee-jerks absent, other reflexes and electric reactions normal.

M. D. EDER.

Surgery.

Congenital cystic lymphangioma of the neck in a child (*Australasian Med. Gaz.*, 1910, XXIX, p. 540).—T. Fiaschi records a case of this nature in a little girl, aged 5 years and 10 months. A swelling was first noticed on the right side of the neck when the child was five months old. The swelling was about the size of a pigeon's egg and remained so for two years, when it suddenly increased in size. An incision was made into it and a sanguineous fluid escaped. After being absent for a month the swelling began to form again, and after two years had reached considerable dimensions. The circumference of the neck was fourteen inches. The head was kept inclined towards the left, but all the movements of the head and neck were perfect. Consistence of swelling soft and fluctuating. No pulsation or expansion present. The cyst was carefully dissected out. On pathological examination the cyst wall was found to be a cystic lymphangioma lined with epithelium. The contained fluid was carefully analysed and was reported to exhibit the general characters of lymph.

J. ALLAN.

Ovarian tumour in a child (*Zentralbl. f. Kinderheilk.*, 1910, XV, p. 414).—Bonamy records a case in a girl, who had been healthy up to her third year. Since then she had from time to time attacks of vomiting which were attri-

buted to gastritis, and treated with restricted diet and rest in bed. When five years old she had an unusually severe attack with symptoms of intestinal obstruction. A tender immobile swelling, the size of a mandarine orange, was felt below the umbilicus. Intussusception was diagnosed. At the operation a pedunculated tumour was found springing from the broad ligament. The microscopical examination showed it to be a round-celled cysto-sarcoma. Five months after the operation there was no recurrence.

J. D. ROLLESTON.

Cases of intra-cranial tumour (*'St. Thomas's Hospital Reports,' vol. xxxvii, 1908, p. 125*).—**G. G. Butler**.—(1) Female, aged 8 years. Six months' history of headache, vomiting, and failing vision. Optic neuritis, nystagmus. Weakness of left side of face, left arm and leg. Exploration of cerebellum in two stages, but no tumour found. There was temporary improvement, however, except that vomiting continued. Continual drainage of cerebro-spinal fluid from wound: Post-mortem: Growth size of walnut beneath splenium of corpus callosum and adherent to left anterior corpus quadrigeminum, extending deeply into left hemisphere, and pressing on upper surface of cerebellum. Microscopically, glioma. (2) Female, aged 14 years. Fell down and was concussed three months ago. Subject to headaches and vomiting since. Difficulty in walking two months. Gait reeling, and tendency to fall to the right. Knee-jerks brisk and equal. Lateral nystagmus, optic neuritis. Objects picked up less easily with right hand. Exploration of cerebellum in two stages. Enucleation of tumour, size of walnut, from middle lobe extending into right lobe. Microscopically, spindle-celled sarcoma. Post-mortem: No meningitis. No other tumours found. (3) Male, aged 7 years. There was a history of seven months' headache and vomiting. Nystagmus to left; holds head to left. Dragging of right foot; gait very ataxic, especially in right leg. Coarse tremors in right arm. Calmette positive. Exploration of cerebellum and enucleation of tumour from right lobe. Microscopically, glioma. Post-mortem: Broncho-pneumonia.

JAMES E. H. SAWYER (Birmingham).

Gonorrhœa in an infant aged 5 months (*'Journ. de Méd. de Bordeaux,' 1910, xl, p. 743*).—**Petit de la Villéon** recorded a case with profuse urethral discharges, painful micturition, and balano-posthitis. It is probable that the mother, who was suffering from urethral discharge and cystitis, had infected her child by digital contact. Bacteriological examination was negative, but had not been made until ten days after treatment had been started.

J. D. ROLLESTON.

Gonococcus urethritis in male children (*'Med. Record,' 1910, ii, p. 766*).—**Wolbarst** states that gonorrhœa in male children, though less common than in female children, is by no means rare, and especially occurs among the poor of large cities. Infection is often due to precocious sexual development, but some cases are infected by sexual pervers, and others are due to accidental contamination. The majority of cases occur in boys from four to ten years of age. Gonorrhœal infection in boys is liable to all the complications which occur in the adult. It is possible that many cases of sterility, sexual neurasthenia, and urethral stricture are due to gonorrhœal infection in childhood. Treatment is practically the same as in the adult, but circumcision is often advisable to prevent preputial accumulation of discharge.

The author recommends urethral injections of protargol $\frac{1}{4}$ per cent. or argyrol 1 per cent., administered twice daily and retained for five to ten minutes.

C. F. MARSHALL.

Gonorrhœal arthritis in a child (*Journ. of Amer. Med. Assoc.*, 1910, II, p. 498).—**Lydston** reports the case of an infant, aged 3 weeks, whose eyes had become infected with gonorrhœa at birth. On the fourteenth day the left wrist was swollen, painful, and slightly reddened. Three days later the right knee was similarly affected. The immunity of infants from rheumatism, the typical appearance of the joint, and a moderate temperature of 100° F. to 101° F., together with the clear history of infection, serve to establish the diagnosis. Anti-gonococcal serum was administered hypodermically in 3-minim doses, increasing to 15 minims every other day, and a local anodyne was applied. The reaction was slight and the improvement prompt.

T. R. WHIPHAM.

Appendicitis in childhood (*Journ. of Amer. Med. Assoc.*, 1910, II, p. 2198).—**Deaver** reviews a series of 500 cases in which he has operated. Appendicitis in childhood is characterised by an insidious onset, rapid progress, and obscure symptoms. The earliest case reported occurred in a premature infant, aged 24 days, while the author's youngest was aged 21 months. As to sex, males predominate in the proportion of nearly 2 to 1. Predisposing causes are: (1) Infectious diseases, such as enteric fever, scarlatina, influenza, mumps, whooping-cough, and chickenpox, also probably intestinal catarrh; (2) dental caries; (3) mechanical irritation from concretions, foreign bodies, worms, and possibly errors in diet. The exciting cause is bacterial, and usually the *B. coli communis*. The symptoms in infants are scanty, and the severest type may exist without one of the classical symptoms. In older children, however, the symptoms are sudden and severe. As regards diagnosis the author propounds the epigram—"All cases of abdominal trouble in children are appendicitis until proved otherwise." In infants, owing to the deep situation of the appendix in the pelvis, bladder or urinary symptoms may predominate. The prognosis of acute appendicitis is favourable if the case is operated upon early "before the storm breaks, and while the noon-day quiet holds the hill." In cases in which there is a localised abscess with diffuse peritonitis, moderately high temperature and rapid pulse, and a low leucocyte count with a large percentage of polymorphonuclears, it is best to defer operation. In twenty of the author's cases he waited from two to twelve days before operating so as to allow adhesions to form. After operation intestinal obstruction and secondary abscess must be carefully watched for.

T. R. WHIPHAM.

Intussusception of the vermiform appendix (*Med. Rec.*, New York, 1910, II, p. 1087).—**A. V. Moschcowitz** reports a case of intussusception of the appendix in a boy, aged 4 $\frac{1}{2}$ years, which was successfully operated upon. He has collected twenty-four recorded cases, and gives the following analysis: Out of the twenty-five cases twenty were reported by British or American authors. Eighteen cases occurred in the first decade of life with an average age of five years. Pain is intense, localised round the umbilicus and characteristically remitting; between the attacks the patient feels well. The symptoms continue for weeks or months, and there is an interval of several weeks as a rule between the primary invagination of the appendix and the urgent complication of an intestinal intussusception. A

tumour may be felt. The bowels usually continue to act, and blood may be present in small quantities after the acute attacks.

H. D. ROLLESTON.

Intussusception complicated by appendicitis (*Journ. Roy. Army Med. Corps*, 1911, xvi, p. 307).—**Major G. J. Stoney Archer**.—A male infant, aged 8 months, presented symptoms of acute intussusception. Laparotomy was performed, and the intussusception reduced. The walls of the cæcum were much thickened; the distal portion of the appendix was swollen and of a dark red colour, and presented a marked constriction about one inch from the lip. The appendix was removed, and on being opened showed a congested and ecchymotic mucous membrane, with a small ulcer about an eighth of an inch in diameter. Recovery took place. The writer regards the appendicitis as the cause of the intussusception.

J. D. ROLLESTON.

Ileo-colic intussusception with resection of twenty-two inches of gangrenous gut (*Med. Record*, 1911, I, p. 605).—**W. S. Schley** showed the patient, a girl, aged 6 years, on whom the above operation had been performed. Marked sepsis developed after the operation, but the patient gradually recovered perfect health.

F. R. B. ATKINSON.

Hirschsprung's disease (*Nord. med. Ark.*, 1910, Afd. II, Nr. 8, p. 26).—**J. Schou** records a case in a boy who, until he was fourteen years of age, could not defæcate without laxatives or enemata. He then had an attack of intestinal obstruction for which colopexy was performed. Improvement followed, although he still frequently required drugs and enemata to open his bowels. Four months later he had another attack. At the second operation enormous dilatation of the sigmoid, descending colon and part of the transverse colon was found. Resection of the whole of the dilated gut was performed. The boy has since been in good health. He now has a daily motion spontaneously and the girth of his abdomen is normal.

J. D. ROLLESTON.

A case of megacolon congenitum (*Zentralbl. f. Kinderheilk.*, 1911, xvi, p. 80).—**S. Fritz** records a case in a boy, aged 8 years, who since birth had had an enormous belly and suffered from constipation and lately had had repeated vomiting. The circumference of the abdomen at the level of the umbilicus was 72 cm., and at xiphisternum 97 cm. Systematic intestinal lavage produced temporary improvement, but six months later he had a sudden attack of violent abdominal pain accompanied by vomiting, meteorism, and cardiac depression. The whole of the large intestine, which was found to be much dilated, was removed. Death occurred three days after the operation. At the necropsy fibrino-purulent peritonitis and a subhepatic abscess were found.

J. D. ROLLESTON.

The operative treatment of congenital atresia of the last portion of the intestine (*Riv. di Clin. Pediat.*, 1910, vii, p. 989).—**G. Razzaboni** relates a case of imperforate anus. He considers that in such cases the operation of election is by the perinæal route whenever the blind end of the intestine is within easy reach, as can be demonstrated by radioscopy. In other cases, however, laparotomy is preferable, since it allows the gut to be freed satisfactorily without risk of hæmorrhage.

VINCENT DICKINSON.

Dermatology and Syphilis.

Cutaneous diphtheria (*Boston Med. and Surg. Journ.*, 1910, II, p. 730).—**E. H. Place**.—During the past three years cutaneous diphtheria has been seen in the south department of the Boston City Hospital in the following conditions: (1) Like impetigo contagiosa on the hands and face; (2) on the auricle, chiefly the concha, extending from the middle ear, and behind the auricle, inoculated upon eczematous lesions; (3) inoculated upon lupus vulgaris on the face after curettage; (4) in wounds and abscesses on the neck and face; (5) inoculated upon varicella lesions, most commonly in the vulva or in the vagina. The present case is that of a girl, aged 7 months, breast fed, who had suffered from birth from eczema of the pubis, groins, and thighs. On admission to hospital greyish membrane covered the lower third of the abdomen, vulva, perinæum, anterior parts of the buttocks, and upper quarter of the internal surface of the thighs. Examination of the mouth, nose and throat was negative. There was marked prostration. Cultures from the skin showed virulent diphtheria bacilli, but cultures of the nose and throat, both of child and mother, were negative. Twelve thousand units of antitoxin were given. On the third day after admission the membrane was clearing rapidly, but the general condition became worse and death took place. The necropsy showed hyperplasia of the lymphoid tissue, "septic spleen," commencing broncho-pneumonia in both lungs, and pus in the middle ear. The source of infection could not be discovered.

J. D. ROLLESTON.

Cutaneous diphtheria (*Bristol Med.-Chir. Journ.*, 1910, xxviii, p. 231).—**W. Kenneth Wills**.—A boy, aged 6 years, who had had a sore throat in December, 1909, developed in the following February a copious vesiculopustular eruption on the back, chest, and abdomen, with a few scattered lesions on the face and limbs. Shallow ulcers were found on the lips and soft palate. There was conjunctivitis of both eyes. The temperature was of a septic type, and there was profound toxæmia. Organisms morphologically resembling Klebs-Loeffler bacilli were obtained in cultures from the nose, eye, and skin lesions. Rapid improvement followed the injection of diphtheria antitoxin.

J. D. ROLLESTON.

The significance of tuberculides in the diagnosis of tuberculosis in infancy (*Journ. of Amer. Med. Assoc.*, 1910, II, p. 1721).—**Leopold and Rosentern** report twelve cases of tuberculides in infants, the majority of whom were either tuberculous or had a history or some symptom suggestive of the disease. In four there were no other signs or symptoms of tuberculosis, but in all the von Pirquet reaction was positive. The authors conclude that papulo-squamous and papulo-necrotic tuberculides are present in a large percentage (40 per cent. in their series) of cases of tuberculosis in infancy. The lesions may appear on any part of the skin, but the seats of selection are the arms, the lower part of the back, and especially the extensor surface of the lower extremities. At times the tuberculides are the only evidence of tuberculosis present, and they are, therefore, of great diagnostic value.

T. R. WHIPHAM.

Herpes zoster in an infant (*Lyon. Méd.*, 1910, cxv, p. 810).—**Planchu and Rendu** record a case of typical herpes zoster in a premature but healthy infant, aged $2\frac{1}{2}$ months. The distribution of the eruption was

in the third and fourth right intercostal spaces. It was not attended by rise of temperature and rapidly healed. Zoster is extremely rare in infancy as Galka has recently shown (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, p. 277). J. D. ROLLESTON.

Contagiousness of infantile herpes (*Paris M'ed.*, 1910, 1, 102).—**R. Cruchet** believes with many others in the epidemicity and contagiousness of herpes. In the space of one month (September to October) he met with five cases of this complaint in children ranging from eighteen months (femoral), to four years (intercostal), ten years (femoral), and eleven and twelve years (intercostal). In four of these cases real contagion could not be proved, but in the fifth, a child, aged 18 months, it was more than likely. A child, aged 4 years, was admitted to the hospital suffering from well-marked intercostal herpes, and three days afterwards the baby was admitted to the adjoining bed for slight bronchitis. Three days after admission well-marked femoral herpes showed itself. As is the rule in children, there were no general phenomena nor any pain connected with the complaint. The author notes the rarity of the disease in children. F. R. B. ATKINSON.

Herpes facialis in scarlet fever (*Brit. Journ. Derm.*, 1910, xxii, p. 309).—**J. D. Rolleston** in 413 cases of scarlet fever noted herpes facialis in 27 patients, or 6·5 per cent., a figure slightly exceeding that which he had found in diphtheria (4·2 per cent. among 1370 cases). In 23 cases the lips alone were affected, in 2 the nostrils as well, in 1 the right cheek only, and in 1 the nostrils and the right cheek. The facial herpes of scarlet fever, like that of diphtheria, showed no predilection for young children, but was found at all ages except early infancy. The youngest case was three years old, although 24 of the 413 were below that age. As in diphtheria, the eruption was essentially a phenomenon of the acute stage. In all but five it occurred within the first week. One case of herpes progenitalis was noted in a girl, aged 5 years, in association with a vaginal discharge, but no instance of herpes zoster was met with. The eruption was more frequent in the severe than in the mild cases, occurring in 12·6 per cent. of the former as compared with 4·2 per cent. of the latter.

AUTHOR'S ABSTRACT.

Epidemic diseases of the hair (*St. Petersburg. med. Wochens.*, 1910, xxxv, p. 425).—**Hirschberg** deals in detail with the pathology, ætiology, diagnosis, and treatment of microsporic and megalosporic ringworm and favus. He has employed the X rays in 129 cases. Forty-nine have been completely cured without any recurrence, in 47 there was a recurrence of the disease. In 9 cases of favus there was permanent loss of hair. In 1 case the X rays seemed to be of some service in favus of the nails, but in most of these cases it was without effect. The after-treatment of the favus cases by iodine, pyrogal, washings, etc., must be most carefully carried out, as there is danger of permanent baldness. M. D. EDER.

The occurrence of favus in London elementary schools and its recent treatment (*School Hygiene*, 1910, 1, p. 697).—**J. F. Halls Daly** records his experience in connection with the treatment of favus in a special school in London. The earlier cases were treated with ointment and lotions and the later ones by means of the X rays. So successful was

the experiment that in the early summer of last year the school was closed, having then accomplished its work. With one exception all the children who came under treatment were aliens. The following method of treatment was found to give the best results: On the day previous to the application of the X rays the hair was cut quite short with clippers, which were then sterilised, and the child's head was washed with soft soap. If many crusts or much suppuration were present further cleansing was effected by applying cyllin poultices. X rays were then applied after Kienbock's method. Protection for the nurse and operator was attained by the use of a suitable shield. Eighteen days later the head was washed, by which time the hair had begun to fall out. A cyllin poultice was applied daily for the next three days, the head being washed every day subsequently for seven to ten days. By this time the scalp should present a billiard-ball appearance, and if there should be a few stumps yet remaining, these were picked out individually with epilation forceps. Unless contra-indicated, a solution of izol or cyllin was painted on once weekly or an anti-parasitic ointment applied "to make assurance doubly sure." A new growth of hair appeared in about nine weeks' time, and by the end of three months was often half an inch in length.

J. ALLAN.

Mongolian blue spots ('*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, 1911, xxxi, p. 49).—J. Comby and G. Schreiber record a case in a male infant, aged 5 months, whose father was a Parisian and mother a native of Loire-et-Cher. Since birth the child had had a lozenge-shaped patch in the internatal cleft. It was of a slate-blue colour, did not project above the skin, and was not covered with hair. These spots are rare in white races, being found among Europeans in only 2 per 1000.

J. D. ROLLESTON.

A case of Mongolian blue patches ('*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, 1910, xxx, p. 677).—A. Fruhinholz, of Nancy, recorded a case in a girl, aged 3 months, a firstborn, who had two dark blue spots in the internatal cleft the size of a two-franc piece. They had been present at birth. The mother was a native of Alsace, and had a fair complexion; the father was a native of Burgundy, and had very dark skin and dark hair. In the subsequent discussion Apert stated that this was the seventh case which had been published in France. Many had occurred in Jewish children, who probably had a special predisposition thereto, similar to that which they presented to amaurotic family idiocy (*cf. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1910, vii, p. 520).

J. D. ROLLESTON.

Sites of syphilitic chancres in children ('*Ann. de Mal. Vénér.*, 1910, v, p. 262).—Gaucher and Flurin.—Twenty-three cases of chancres in children under fifteen years of age occurred in Prof. Gaucher's service at the Hôpital St. Louis in the period 1902–1910. In 6 cases the lips were affected, in 3 the eyes (lids and caruncle), in 2 the scalp, in 1 the breast, in 1 the groin, in 1 the anus, and in 9 the genitals. The perigenital region was more frequently affected than the genitals themselves.

J. D. ROLLESTON.

Immunity in syphilis; reinfection and superinfection ('*Thèses de Paris*, 1909–1910, No. 385).—Pinard.—In the part of this thesis dealing with hereditary syphilis the author adopts Gaucher and Rostaine's classification

of the children of syphilitic parents into four groups: (1) Those who are absolutely healthy; (2) the dystrophic (quaternary and quinary); (3) tertiary (late heredo-syphilis); (4) secondary, or early heredo-syphilitics. The two first groups contract acquired syphilis frequently; the third group may also contract it, but more rarely; the fourth group (in which lesions of hereditary syphilis are present at birth), according to Pinard, may also contract acquired syphilis, although rarely. Pinard thinks there are many exceptions to Colles's law, and that a woman can give birth to syphilitic infants while remaining healthy herself. In other words, he considers that paternal syphilis may be transmitted to the child without infecting the mother.

C. F. MARSHALL.

Persistent crying in inherited syphilis ('*Arch. de Méd. des Enf.*,' 1910, XIII, p. 580).—**G. Sisto** records eight illustrative cases in addition to five recently published by Comby (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, XIII, p. 266). He attributes the symptom to pain localised in the epiphysal regions, disease of which can be shown by the X rays. The cries are sometimes the only symptom, but in most cases they are associated with other evidence of inherited syphilis. Specific treatment stops the crying, and this favourable result is often immediate.

J. D. ROLLESTON.

The pituitary gland in inherited syphilis ('*Bull. de la Soc. franç. de Derm.*,' 1910, XXI, p. 198).—**A. Paris** and **G. Sabaréanu** examined the pituitary gland in seven heredo-syphilitics born dead or who died shortly after birth. Three in whom death took place in the fifth, sixth, and eighth months respectively, of intra-uterine existence, showed numerous spirochætes in the anterior lobe of the pituitary gland, but none in the nervous lobe. The spirochætes were also found in these three cases in the liver, spleen, kidney, and suprarenals. In the other four cases examination of the other organs was also negative, except in one case in which both liver and spleen contained spirochætes. The writers conclude that the localisation of the *Spirochæta pallida* in the pituitary gland indicates a simultaneous infection of most of the other organs.

J. D. ROLLESTON.

Syphilis and congenital mental deficiency ('*Glasgow Med. Journ.*,' 1910, II, p. 342).—**Ivy McKenzie**, on the strength of the Wassermann reaction, concludes that syphilis plays a larger part in congenital mental affection than is generally supposed. A positive reaction may be obtained in children who have congenital mental diseases but show no other signs of syphilis. Also children of syphilitic parents may give a positive reaction, although they may present no symptoms or signs of congenital syphilis. The part played by syphilis in cases where the nervous disturbance is purely psychical can only be determined by the biological test. How far syphilis is responsible for mental enfeeblement and retarded development without obvious mental disease is a problem which can only be solved by application of the biological test to parents and to families of recognised syphilitics.

C. F. MARSHALL.

Mental deficiency in Denmark and Wassermann's reaction ('*Hospitalstidende*,' 1911, LIV, p. 169).—**O. Thomsen**, **H. Boas**, **B. Hjorth** and **W. Leschly**.—Among 2061 cases of mental deficiency only thirty-one, or 1·5 per cent. gave a positive Wassermann's reaction. Of these five had

undoubtedly had acquired syphilis, but in them the infection was so recent that the mental deficiency could not be attributed to syphilis alone. In the other twenty-six the disease was either congenital or had been acquired at a very early age. The most positive reaction was obtained in patients between the ages of five and ten years. Six cases gave a negative reaction, but had either clinical evidence or a definite history of congenital syphilis. The writers conclude that the serum test does not justify the opinion that syphilis plays any important part in the production of mental deficiency in Denmark.

J. D. ROLLESTON.

Treatment.

Congenital hypertrophic stenosis of the pylorus, with special reference to its treatment (*Practitioner*, 1910, II, p. 659).—**James H. Nicoll** gives a short paper on this subject based on the results of treatment of nine cases which have come under his care during the past six months. He thinks two degrees of pyloric obstruction in infants can be recognised, viz. minor (spasm?), to be treated by dieting, and major (hypertrophy?), for which early operation alone is curative. With regard to dieting each case requires to be considered individually. The diet generally prescribed by the author consists of a very thin paste made by mixing with milk flour which had been baked. Two axioms based on his experience are laid down: (1) Frequent changes are necessary; if a particular food does not "stay down" after a three days' trial, it should be abandoned for another; (2) if after three weeks' dieting, even in cases of apparently minor degree, vomiting still persists, dietetic treatment should be abandoned, and operation undertaken while strength remains for the ordeal. It is pointed out that the undeservedly high reputation of dietetic measures rests on three fallacies: (a) erroneous diagnosis; (b) temporary improvement; (c) an exaggerated impression of the mortality attending operative treatment. Successful operative treatment depends on: (1) a skilled operator, a surgeon who can operate quickly and who has acquired delicacy of touch in manipulating the fragile structures; (2) a physician or family medical adviser, who is fully alive to the benefits of surgical treatment and who advises early operation in suitable cases; (3) a nurse who knows something of the care of infants and who is prepared to nurse the child "maternally" as well as "surgically." In concluding the author briefly enumerates the surgical procedures of which he has had experience.

J. ALLAN.

Treatment of acute anterior poliomyelitis (*Journ. Amer. Med. Assoc.*, 1910, II, p. 1804).—**Skoog**, in dealing with the treatment of the prodromal and acute stages of this disease, recommends rest as essential. It is possible that if absolute rest could be obtained for a few days before the paralysis is due many cases would abort without it. Lumbar puncture is of value in cases of meningeal infiltration, and particularly when there is an increased amount of cerebro-spinal fluid. Hexamethylenamin (urotropin) may be used in these cases, formaldehyde being present in the cerebro-spinal fluid thirty minutes after its administration. The author gives .12 to .24 grm. to a child two to four years of age every hour for three doses, and repeats the same daily as long as acute symptoms persist. In cases with much pain and hypersensitiveness, the salicylates, preferably sodium salicylate or aspirin, afford relief, and a heavy cotton-wool dressing to the affected extremity is also useful. Isolation of the patient should

be insisted upon, and all articles used by the patient as well as the excreta should be disinfected.

T. R. WHIPHAM.

The value of "606" in children's diseases (*Zent. f. Kinderheilk.*, 1911, xvi, p. 1).—**E. Schreiber** finds that injection of syphilitic mothers four weeks at least before parturition is followed by good results as far as the child is concerned. In twelve pregnant syphilitic women, of whom six had given birth at the time of writing, there were no traces of syphilis in the children. The author uses intra-muscular injections into the glutei, dividing the injection into three parts which equal 0·01. In feeble sucklings he begins with 8 mgrm., in stronger children 1 cgrm., and increases the dose after fourteen days and has had good results. In older children he uses the remedy intra-venously. The author has not found "606" used with discretion and in proper doses any more dangerous than mercury. He thinks that perhaps a combination of treatment with mercury and "606" would achieve the most lasting results.

F. R. B. ATKINSON.

Comparative value of mercury and "606" in congenital syphilis (*Med. Record*, 1911, i, p. 85).—**J. W. Brannan**, at a meeting of the Practitioners' Society of New York, mentioned cases of congenital syphilis which he observed at the Charité Hospital, Berlin, half of which were under mercurial treatment, and the other half under treatment by "606." The former series were said to be doing much better than the latter.

C. F. MARSHALL.

Gonococcus vulvo-vaginitis in children, with results of the vaccine-therapy in out-patients (*Medical Record*, 1910, i, p. 769).—**Hamilton** reports the results of treatment of 344 cases of vulvo-vaginitis in children, averaging five years in age. Of these, 260 were treated by irrigation, 158 being cured, 53 not cured, and 49 lost. Vaccine treatment was given in 84 cases, 76 being cured, 5 not cured, and 3 lost. The average time of treatment by irrigation was 10 months, by vaccines 1·7 months. Three cures were obtained in infants under a year old, the youngest being three weeks. From these results Hamilton concludes that the vaccine treatment of vulvo-vaginitis is indicated for the following reasons: (1) The short duration of the treatment required in over 85 per cent. of the cases; (2) the ease of administration; (3) the absence of harmful results when aseptic precautions are taken. He considers estimation of the opsonic index unnecessary.

C. F. MARSHALL.

Reviews.

Feeble-mindedness in children of school age. By C. P. LAPAGE, M.D., M.R.C.P., Physician to the Manchester Children's Hospital, etc. With an appendix on Treatment and Training by MARY DENDY, M.A. Manchester: Sherratt and Hughes, 1911. Price 5s. net.

THE object of this book is threefold: to provide a volume suitable for school medical officers and teachers dealing with feeble-minded children; to emphasise the importance of mental deficiency; and to draw attention to

the facts that it is hereditary and transmissible. We consider these objects have been achieved. The book is a clear and accurate short account of the characteristics of feeble-minded children, which cannot fail to be of service to those for whom it is intended. The directions for the general management of these children are sound, the short chapters on causation are critical and clear, and adequate attention is drawn to the incurability of the condition and the need for life-long supervision. There is a useful glossary, a list of homes and institutions, and a bibliography of all the recent textbooks and literature on the subject. The appendix contributed by Miss Dendy is, as we should expect, clear and practical, and is a valuable addition to the book. The only feature we do not like is the popular account of the infectious and contagious diseases. This is too meagre to be of any service to the school medical officer, who, as a matter of fact, would hardly turn to a book dealing with feeble-minded children for information on these subjects, whilst there is the likelihood that it may supply the teacher and layman with that little knowledge which is a dangerous thing. Apart from this, however, the book is excellent.

A. F. T.

GOLDEN RULES FOR DISEASES OF CHILDREN. By GEORGE CARPENTER, M.D. Fourth edition, revised and partly re-written by E. BELLINGHAM SMITH, M.D. Bristol: John Wright and Sons. Pp. 124. Price 1s.

THE fourth edition of this little book has been revised and partly re-written. It is a compendium of useful hints on both diagnosis and treatment, founded mainly on the experience of the original author. While not professing to be more than a book of rules, it contains much sound information in a small compass, and will repay perusal by those who are not thoroughly conversant with the diseases of children. The amount of ground it covers is considerable, and all the important ailments of childhood are touched upon.

T. R. W.

MEMORIAS DO INSTITUTO OSWALDO CRUZ. Tomo 11. Fasciculo 1. Rio de Janeiro, 1910.

THESE transactions are published in Portuguese and some foreign language in parallel columns. In the present volume the foreign language is German for eight of the papers, English and French having each one paper.

Dr. Hartmann describes a new intestinal amœba (with plates) which he found in the large intestine of an imported European land tortoise. Dr. A. Godoy has obtained a new vaccine against anthrax from the dried muscle juice obtained from naturally infected cattle in Minas. He gives the results obtained from the inoculation of cattle on a large farm, and considers that his process should replace the empirical methods still in use. Dr. Gomes de Faria describes and figures a new trematode—*Dicrocoelium infidum*; Dr. Aragão, a new flagellate (*Polytomella agilis*), Dr. Lutz has some short notes on various diptera of Brazil, Dr. Hartmann and Dr. Chagas an important paper on flagellata, including a complete classification and a bibliography with several plates. Dr. Godoy has a short paper on the quantitative formation of spores and its relation to temperature. The most important conclusion of Dr. Neiva's experiments on the formation of a quinine-resistant race of malaria parasites is that human beings in malarial districts must frequently increase the dosage of quinine and must continue the drug when

they return to malaria-free countries, otherwise they may there have their first attack of ague.

M. D. E.

MEMORIAS DO INSTITUTO OSWALDO CRUZ. Tomo II, Faciculo II.
Rio de Janeiro, 1910.

THESE memoirs are devoted to the subject of biology, and appear at least once a year in the shape of a tome of 200 pages. The articles are written in Portuguese with a German translation side by side, and there is one article in English. Save for one on tuberculosis all the articles are biological, and are only of interest to those who study biology. There are some good plates.

F. R. B. A.

FLAME AND FLANNELETTE. By ROBERT J. PARR, National Society for Prevention of Cruelty to Children. Pp. 88. Price 3d.

MR. ROBERT J. PARR, Director of the National Society for the Prevention of Cruelty to Children, is to be congratulated on the production of this interesting booklet. He tells us that 1400 children are burnt to death annually—a death-roll due in part to parental carelessness, in part to the extraordinary fascination exercised by fires and matches on the child mind. He instances several very dangerous practices, such as removing burning coals from the grate to the common yard in order that the fireplace may be cleaned, pouring oil on a dying fire, and producing an upward draught by newspaper. It is urged that children should never be left alone with matches, that the sale of match-boxes adorned with illustrations from well-known nursery rhymes should be prohibited, that the "Non Flam" material invented by Dr. Perkin, Professor of Organic Chemistry in Victoria University, and manufactured by Messrs. Whipp Bros. and Todd, of Manchester, should take the place of the cheap but dangerous flannelette. Since flannelette was introduced there has been an increase in deaths from burning of over 62 per cent. for all ages under five, while not a single fatality has been reported among those wearing the "Non Flam" garment.

C. R.

THREE PAMPHLETS ON MILK SUPPLY. Price 2s. per 100, 17s. 6d. per 1000 copies.

THE National League for Physical Education and Improvement have issued three leaflets on how to get clean milk and how to keep it so. They are addressed to farmers, retailers, and housewives. The first of these leaflets is the most detailed, and rightly so, for the farmer has the best and first chance of fouling the milk, and in the majority of instances makes the most of his opportunities. The leaflet begins with the care of the cow, and lays great emphasis on cleaning the udder and teats, but unfortunately makes no sufficiently definite remarks upon grooming and cleaning round the tail region. The rules for milkers and the hygienic care of the cowshed are excellent, and it is pleasing to note that the washing of the milker's hands is made part of the daily routine of every well-organised dairy.

The leaflet to housewives contains valuable advice on the cleaning of milk-vessels, the danger of flies, and the consequent necessity of the frequent emptying of ash-pits and pail-closets. It is to be hoped that medical officers of health, school doctors and health missionaries will distribute these pamphlets widely to the ignorant and filthy of these islands.

C. R.